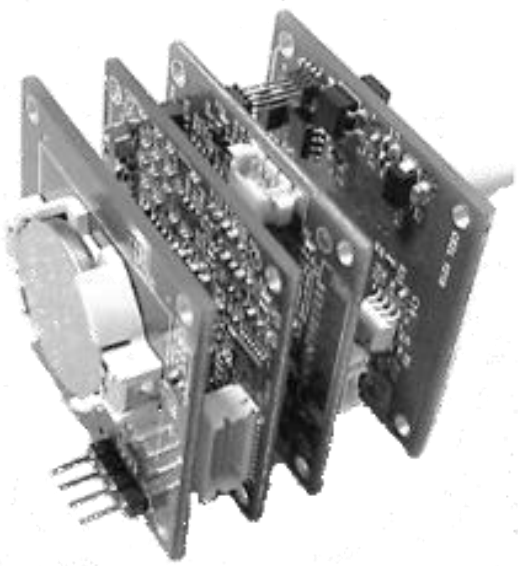
DVE-DM365
Digital Video Encoder
Configuration and User Guide



Revision 1.2

© 2013 RadiumBoards
All Rights Reserved

Copyright Notice

This document is copyright of RadiumBoards, All Rights Reserved. No part of this document, in whole or in part, may be used, reproduced, stored in a retrieval system or transmitted, in any form, or by any means, electronic or otherwise, including photocopying, reprinting, or recording, for any purpose, without the express written permission of RadiumBoards.

Legal Disclaimer

The information contained in this document is subject to change without notice. The information in this document is provided for informational purposes only. RadiumBoards specifically disclaims all warranties, express or limited, including, but not limited, to the implied warranties of merchantability and fitness for a particular purpose, except as provided for in a separate software license agreement.

Radium Boards

RadiumBoards is a unique website providing complete board and software solutions addressing a broad range of markets including Security and Surveillance, Networking, Wireless, Video, Audio, Automotive, Mobile Device and IoT (Internet of Things).

OEMs and Systems Integrators can shop for complete assemblies, with firmware, BSP and applications ready to integrate into your own enclosures.

ODMs can shop for reference designs complete with full BSP (Board Support Package) and application support. Radium Boards can also provide any level of customization to the hardware or software required by the ODM to help differentiate in their markets.

Electronics hardware and software hobbyists, experimenters and educators now have access to complete high performance platforms for application in an infinite range of projects.

Correspondence

Corporate Office
B-22, Infocity Sector-34,
Gurgaon-122001, Haryana, India
Tel No: +91 124 4284250

US Office
2025 Gateway Place, Suite 465
San Jose, California 95110

E-MAIL

info@radiumboards.com

WEBSITE

www.radiumboards.com

VVDN Technologies

VVDN Technologies Pvt Ltd. is a sibling company of RadiumBoards and is responsible for the design and development of all products sold through the RadiumBoards brand.

Founded in 2007, VVDN is a technology innovation and development company providing a broad spectrum of services and technology expertise to our core domains. VVDN provides “Concept to Customer” services at any point in the development cycle, as well as full turnkey solutions.

WEBSITE

www.vvdntech.com

© 2013 RadiumBoards
All Rights Reserved

1. ABOUT THIS DOCUMENT 6
Purpose 6
Intended Audience 6
Document Conventions 6
Terms and Abbreviations 7
2. OVERVIEW OF THE DVE-DM365 8
Hardware Overview 9
Features 12
Technical Specifications 13
System Requirements 14
3. INSTALLING THE DVE-DM365 15
Connecting the DVE-DM365 15
Assigning an IP Address 15
4. ACCESSING THE GUI 18
Log In 18
IMPORTANT NOTES: 20
Accessing the Configuration 21
5. CONFIGURE SYSTEM SETTINGS 22
6. CONFIGURE NETWORK SETTINGS 24
Configure FTP Settings 26
Configure DDNS Settings 27
Configure SMTP Settings 28
Configure SMS Settings 30
CONFIGURE 3G SETTING 31
CONFIGURE NAS SETTING 32
7. CONFIGURE AUDIO SETTINGS 33
8. CONFIGURE VIDEO SETTINGS 35
Video Encoding 36
Video Parameters 37
Profile Scheduler 37
OSD 38
9. EVENT CONFIGURATION 39
Audio Detection 40
Network Loss 41
Video Loss 42
External Trigger 43
Motion Detection 44
Recording Scheduler 45
Event Scheduler 45
Heartbeat Images 46
10. ALARM ACTION 47
Media Storage 48
Notification 49
11. PRIVACY MASKING 50
12. PTZ 51
Protocol 52
Preset 53
Tour 55

© 2013 RadiumBoards
All Rights Reserved

User 56
13. MAINTENANCE 57
Config 57
Reboot 58
SD Card 58
Firmware 59
Logs 61
SSL 62

Figures

Figure 1 DVE-DM365 Assembly 9
Figure 2 Processor Card 10
Figure 3 NIC Card 10
Figure 4 I/O Card 10
Figure 5 Power Over Ethernet (POE) Card 11
Figure 6: The Audio Settings Page 33
Figure 7 External Trigger 43

Tables

Table 1: Document Conventions 6
Table 2 Terms and Abbreviations 7
Table 3 DVE-DM365 Model Configurations 8
Table 4: DVE-DM365 Interface Description 11
Table 5 DVE-DM365 Module Configurations 12
Table 6 Technical Specifications 13
Table 7 Fields in the Network Settings Menu 25
Table 8 Fields in the FTP Server Setup Page 27
Table 9 Fields in the DDNS Application Setting Page 28
Table 10 Fields in the SMTP Application Settings Page 29
Table 11 Fields in the SMS Settings Menu 31
Table 12 Fields in the SMS Settings Menu 32
Table 13 NAS Settings Page 33
Table 14 Fields in the Audio Setting Page 34
Table 15 Fields in the Video Encoding Page 36
Table 16 Fields in the video parameters Page 37
Table 17 Fields in the Profile Scheduler Page 37
Table 18 Fields in the OSD Settings Page 38
Table 19 Fields in the Action Types Setup Page 40
Table 20 Fields in the Action Types Setup Page 41
Table 21 Fields in the Action Types Setup Page 42
Table 22 Fields in the Action Types Setup Page 43
Table 23 Fields in the Action Types Setup Page 44

© 2013 RadiumBoards
All Rights Reserved

Table 24 Fields in the Recording Schedule Page 45
Table 25 Fields in the Event Schedule Page 45
Table 26 Fields in the Heartbeat Image Page 46
Table 27 Fields in the Media Storage Page 48
Table 28 Fields in the Notification Page 49
Table 29 Fields in the Protocol Page 52
Table 30 Fields in the Preset Page 54
Table 31 Fields in the Tour Page 55
Table 32 Fields in the Config Page 57
Table 33 Fields in the Reboot Page 58
Table 34 Fields in the SD Card Page 59
Table 35 Fields in the Firmware Page 60
Table 36 Fields in the Log Page 61

© 2013 RadiumBoards
All Rights Reserved

1. ABOUT THIS DOCUMENT

Purpose

This document provides details of the DVE-DM365 including its features and functionality and how to install and configure the DVE-DM365.

Intended Audience

This document is intended for these target groups:

- Installation Engineers
- Network Administrators

ⓘ**Note**: It is pre-requisite to have knowledge of Wi-Fi and networking.

Document Conventions

The different conventions used in this document are explained in the following table:

Table 1: Document Conventions

Convention	Description
ⓘ	**Note**: Provides information about important features or instructions.
⃠	**Caution**: Alerts you to potential damage to a program, device, or system.
⚡	**Warning**: Alerts you to potential injury or fatality and to potential electrical hazards.
`file/directory names`	All Courier New
Bold font	Any option that needs to be selected or typed in the user interface is represented using bold font.

© 2013 RadiumBoards
All Rights Reserved

Terms and Abbreviations

The different terms and abbreviations used in this document are explained in Table 2 below.

Table 2 Terms and Abbreviations

Terms / Abbreviation	Description / Expansion
ARP	Address Resolution Protocol
AVI	Audio Video Interleave
BLC	Back Light Compensation
CIF	Common Intermediate Format
CIF	Common International Format
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
DDNS	Dynamic Domain Name System
FTP	File Transfer Protocol
GIO	General-purpose Input Output
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IP	Internet Protocol
JPEG	Joint Photographic Experts Group
LED	Light Emitting Diode
MJPEG	Motion Joint Photographic Experts Group
MPEG	Moving Pictures Experts Group
OSD	On Screen Display
PoE	Power over Ethernet
PTZ	Pan Tilt Zoom
RTCP	Real-Time Transport Control Protocol
RTP	Real-Time Transport Protocol
RTSP	Real Time Streaming Protocol
SD	Storage Device
SMTP	Simple Mail Transfer Protocol
SNMP	Simple Network Management Protocol
SNTP	Simple Network Time Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol
UDP	User Datagram Protocol
UPnP	Universal Plug and Play
URL	Uniform Resource Locator
VGA	Video Graphics Array

© 2013 RadiumBoards
All Rights Reserved

2. OVERVIEW OF THE DVE-DM365

RadiumBoards DVE-DM365 enables you to quickly and cost effectively convert standard analog cameras into highly versatile IP Network cameras, which are ideal for securing locations such as small businesses, offices, shops, hotels or residences. The DVE-DM365 accepts NTSC or PAL video input from an analog camera, converts to digital and then encodes the video into high quality H.264 format which can then be streamed onto an IP Network or stored locally.

DVE-365 is a modular design enabling and wide variety of connectivity, control and power options.

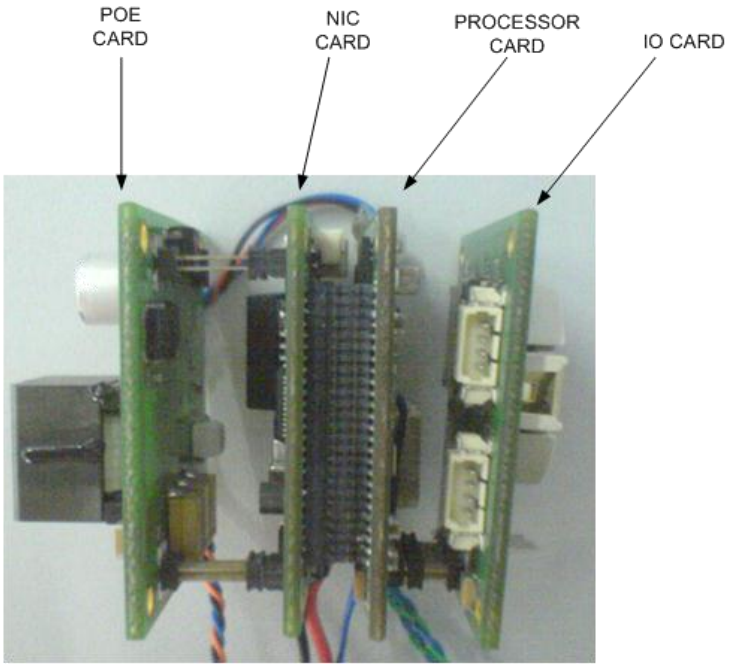
Table 3 DVE-DM365 Model Configurations

Model	Processor	Network	PoE	I/O	Interfaces
DVE-Basic	X	X			Audio-In, Video-In, PTZ, Iris, Ethernet
DVE-L	X	X	X		Audio-In, Video-In, PTZ, Iris, Ethernet + Power Over Ethernet (POE)
DVE-XL	X	X		X	Audio-In, Video-In, PTZ, Iris, Ethernet + USB, Alarm In/Out, SD Card, UART
DVE-XXL	X	X	X	X	Audio-In, Video-In, PTZ, Iris, Ethernet + Power Over Ethernet (POE) + USB, Alarm In/Out, SD Card, UART

© 2013 RadiumBoards
All Rights Reserved

The completely optioned DVE-DM365 assembly, shown in Figure 1 below, contains four boards which are stacked together.

Figure 1 DVE-DM365 Assembly



Hardware Overview

Each of the four (4) different cards available for the DVE-DM365 is shown below and may be used for reference. Note the images are for representation only and may be slightly different depending upon build and revision.

© 2013 RadiumBoards
All Rights Reserved

Figure 2 Processor Card

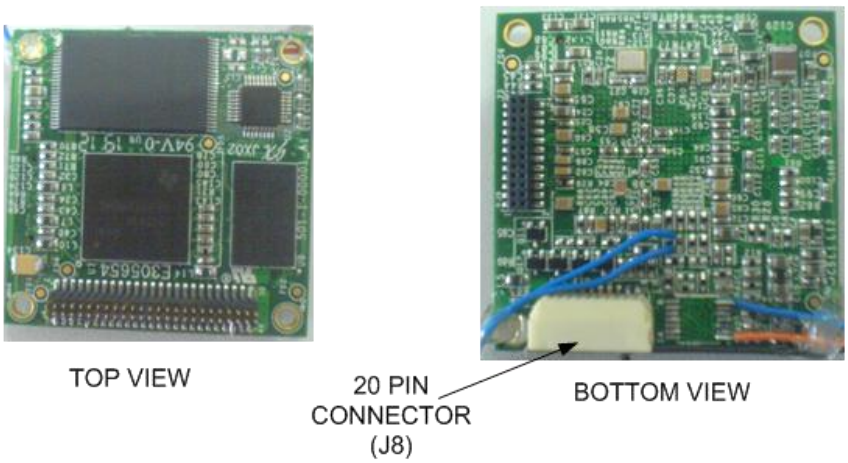


Figure 3 NIC Card

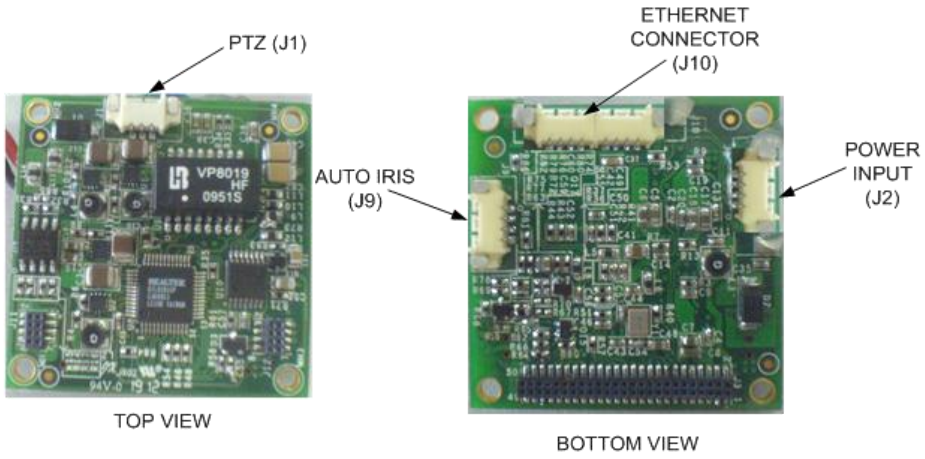
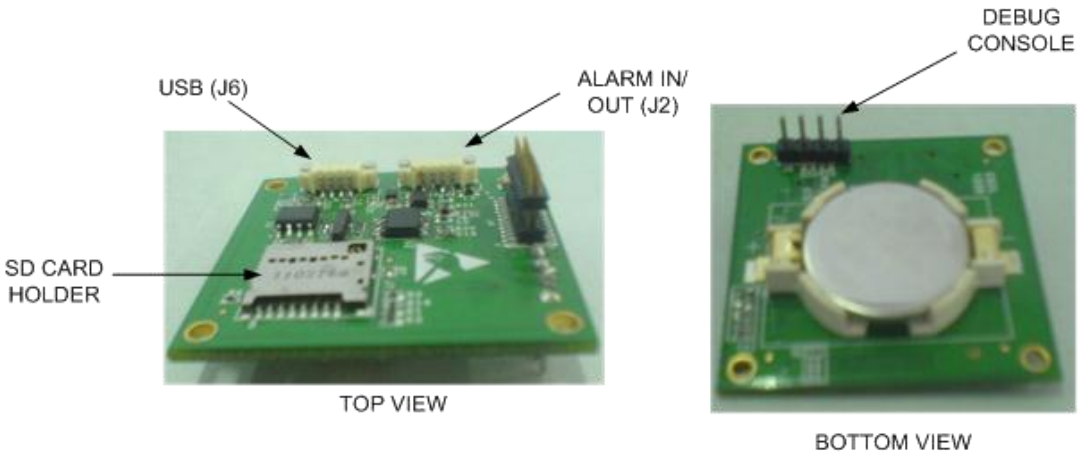
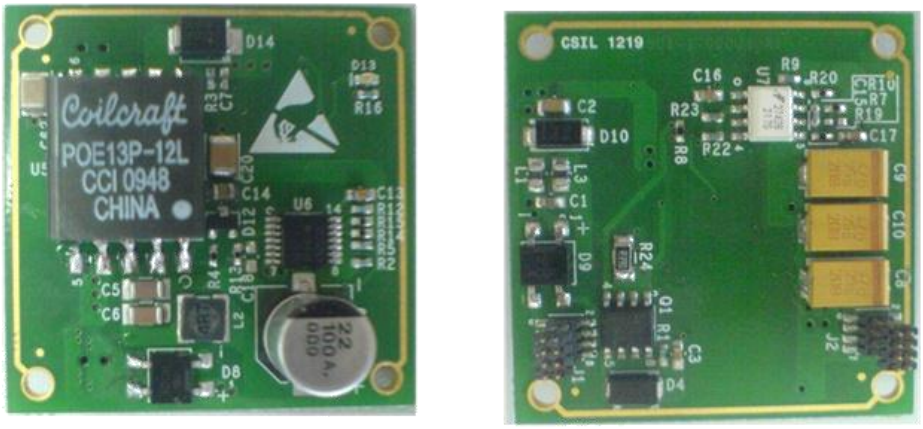


Figure 4 I/O Card



© 2013 RadiumBoards
All Rights Reserved

Figure 5 Power Over Ethernet (POE) Card



TOP VIEW BOTTOM VIEW

Table 4 below describes the various interfaces to the DVE-DM365.

Table 4: DVE-DM365 Interface Description

Interface	Description
Camera Connector	Audio in, audio out, video in and video out interfaces
PTZ	The Pan / Tilt / Zoom (PTZ) menu allows users to pan (move left and right), tilt (move up and down) and zoom in and out within a specific area with just a push of a button and preset positions.
Auto IRIS	Automatically adjustable iris opening in response to changes in light levels
Ethernet Connector PoE	Standard RJ-45 Ethernet connector for IP network connection. If PoE card is attached it allows transmission of power and data via a single Ethernet cable.
Power Input	Power adapter connection. This is a +12V DC inlet, which connects to an external power supply. To be used if no PoE is available.
SD Card Holder	For inserting the SD card to store data directly onto the card.
USB	USB interface can be used to connect the Wi-Fi USB Stick or USB 3G dongle
Alarm In Alarm out	Two alarm ports – input and output available on the back panel of the camera.
Debug Console	Debug console is used for service and debugging purposes.

© 2013 RadiumBoards
All Rights Reserved

Note: There is a secure digital (SD) card slot available on the right hand side of the DVE-DM365. This is used for inserting the SD card and archiving / accessing images or videos from the SD card whenever required.

Features

Radium's DVE PCB suite is a modular design based on the industry leading TI DaVinci DM365 platform SoC. This 4-PCB modular design allows multiple product configurations as described in the table below.

Table 5 DVE-DM365 Module Configurations

Model	Processor	Network	POE	I/O	Interfaces
DVE-Basic	X	X			Audio-In, Video-In, PTZ, Iris, Ethernet
DVE-L	X	X	X		Audio-In, Video-In, PTZ, Iris, Ethernet + Power Over Ethernet (POE)
DVE-XL	X	X		X	Audio-In, Video-In, PTZ, Iris, Ethernet + USB, Alarm In/OUT, SD Card, UART
DVE-XXL	X	X	X	X	Audio-In, Video-In, PTZ, Iris, Ethernet + Power Over Ethernet (POE) + USB, Alarm In/OUT, SD Card, UART

The DVE-DM365 is a feature rich video platform which supports up to D1 resolution, H.264, MPEG and MJPEG compression, motion detection, privacy masking, heartbeat snapshots and much more. The design supports multiple alarm configurations and event detection. Through the USB port and appropriate 3G and Wi-Fi dongle(s), it can support 3G and Wi-Fi streaming.

The device also allows you to accelerate your surveillance camera product designs especially since this design is ready and optimized for production and comes packaged with production grade software, firmware, BSP and configuration utilities.

© 2013 RadiumBoards
All Rights Reserved

Major features of the DVE-DM365 include:

- TI DaVinci DM365 SoC based design
- Modular Design – 4 Cards Allow Multiple Configurations
- NTSC and PAL system support
- Up to D1 Res (PAL:720x576, NTSC:720x480)
- H264, MPEG4 and MJPEG encoding
- 10/100 Base-Tx Ethernet, Wi-Fi, 3G
- Secure RTSP, HTTP
- Video Motion Detection
- Full regular recording: SD Card, FTP and NAS
- PTZ Support
- Multiple Alarm Configurations
- Microphone and speaker support
- Supports micro SD cards up to 32GB in capacity

Technical Specifications

The following table provides the technical specification of the DVE-DM365:

Table 6 Technical Specifications

Image Sensor	720 TVL max
System	PAL/NTSC
Audio	
Compression	G711 , AAC . Vol. 0 - 15
Talk back	2-way Audio
Video	
Compression	H264 , MPEG4 , MJPEG
Resolution	D1, 4CIF, CIF, QCIF, VGA, QVGA
Frame Rate	NTSC: 5-30 FPS, PAL: 5-25 FPS
Bit Rate	64 Kbps-5 Mbps
Video Streaming	Simultaneous H.264, MPEG4 and MJPEG Streams. Configurable Frame rate and rate control(VBR/CBR)
Image settings	Compression, Brightness, Contrast, Saturation, Sharpness, HUE, Auto DC Iris
Profile Schedule	5 Different Video Profiles, Schedule different video profiles for day and night time
Network	
Interface	10/100 RJ-45 Base-TX Ethernet, 3G Wi-Fi
Security	Password Protection: Secure RTSP, Secure HTTP
E-Mail and SMS Support	Full E-mail and SMS support, Test E-mail and SMS Settings
Supported Protocol	IPv4, HTTP, HTTPS, SNTP,FTP, SMTP, DNS, DDNS, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, UPNP, PPPoE, NAS

© 2013 RadiumBoards
All Rights Reserved

Multicast Support	Available
Regular Recording	Full regular recording on SD card, FTP and NAS storage
Intelligent Video	Video motion detection, Privacy masking, Heart Beat Snapshots
Events	Audio Detection, Video and Network Loss, Motion Detection, External Trigger
Alarm Action	FTP recording, SD Card recording with pre-post support, Alarm Out Trigger, Audio alarm out with 5 audio files, NAS Storage, SMS, E-Mail
OSD	Date , Time , Camera Name , Frame rate , Bit rate
3G Support	CDMA - Ix , EVDO , GSM-Edge , GPRS, HSPDA , HSPA+ * *Dependent on the data card
Wi-Fi Support	802.11 a,b,g,n * *Dependent on the Wi-Fi Dongle
PTZ Support	Pan, Tilt, Zoom, Focus 0 - 255 different Presets and Tours
User	Set 9 different users set with Different Privileges
Live View	
Zoom	Zoom in and Zoom out up-to 4x
Snapshot	Local System Snapshot
Video Record	Local Video Record
Logging	Full System and event logs.

System Requirements

The DVE-DM365 may be configured from any PC that is on the same network. The minimum requirements include:

- Operating system: Microsoft Windows 2000, XP, Vista or Windows 7
- Browser: Internet Explorer 6.x with Service Pack 2 or later
- Minimum of 200 MHz processor
- 128MB RAM (recommended)
- Cat5e Ethernet network cable

© 2013 RadiumBoards
All Rights Reserved

3. INSTALLING THE DVE-DM365

Connecting the DVE-DM365

After completing assembly of the DVE-DM365 you may perform the following steps to connect power and network to the camera.

- DC Adapter: Connect the power adaptor plug into the power supply jack and then plug the adapter into a power source. Connect an Ethernet cable from the Ethernet port into the PC.
- PoE Adapter: Insert one end of an Ethernet cable into the port in the PC and other end into the PoE adapter. Connect another cable from the PoE port on the adapter to the camera's port.
- PoE Switch: Insert one end of an Ethernet cable into the PoE switch and other end into the camera. Connect another cable from the PC into the PoE switch.

Optionally connect external input/output alarm devices.

- Connect the cables of the alarm device securely to the supplied alarm I/O terminal block.
- Attach the terminal block to the I/O terminal connector on the camera.

Note: Please use the power adapter supplied with the DVE-DM365. Using a power adapter with a different voltage rating can damage this product.

Assigning an IP Address

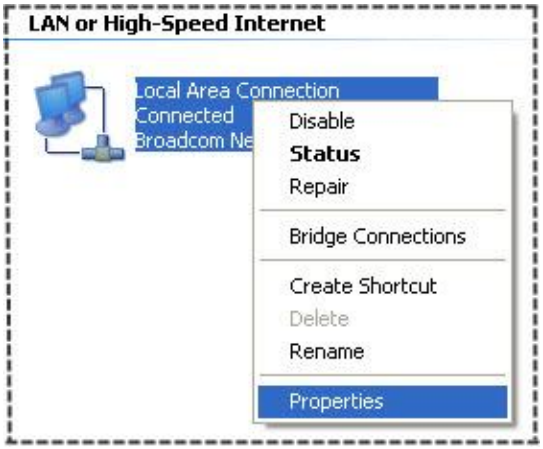
After the DVE-DM365 is installed at an appropriate location you will need to configure its IP address. The camera is configured through an Ethernet connection. Ensure that the system is set on the same IP subnet address. For example, if the default IP address of the camera is 192.168.1.168, then the system should be set at 192.168.1.1 to 192.168.1.254 (excluding the camera's IP address 192.168.1.168) and the default subnet mask is 255.255.255.0.

© 2013 RadiumBoards
All Rights Reserved

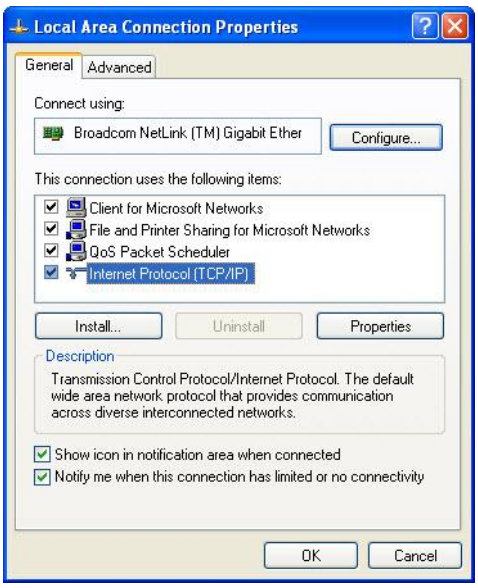
Perform the following steps to configure the IP address:

- Go to desktop, right-click **My Network Places**, and select **Properties**.

- Right-click **Local Area Connection** and select **Properties**.



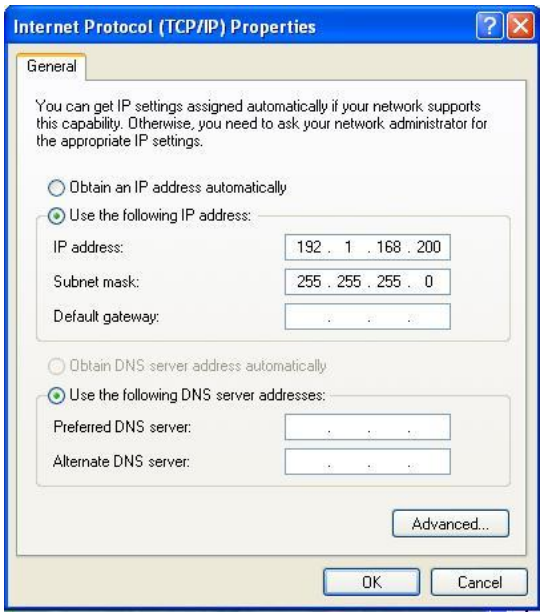
The Local Area Connection Properties dialog box appears.



© 2013 RadiumBoards
All Rights Reserved

- Select the **Internet Protocol (TCP/IP)** checkbox and click **Properties**.

The Internet Protocol (TCP/IP) Properties dialog box appears.



Click **Use the following IP address**. Set the IP address to 192.168.1.x and subnet mask to 255.255.255.0, where x is a number between 2 and 254, except 168.
Click **OK** to close all windows.

This connects the camera to the network. You can now configure and change the default settings of the camera as explained in the subsequent chapters.

ⓘ**Note**: If assigning the IP address fails, check that there is no firewall blocking the operation.

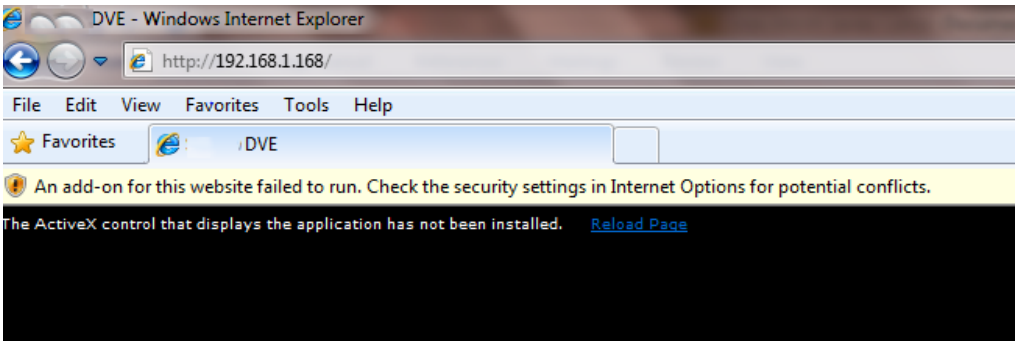
© 2013 RadiumBoards
All Rights Reserved

4. ACCESSING THE GUI

This chapter explains how to access the DVE-DM365 through a web browser. The DVE-DM365 is functional with the default settings, but you can configure and change these settings through the GUI.

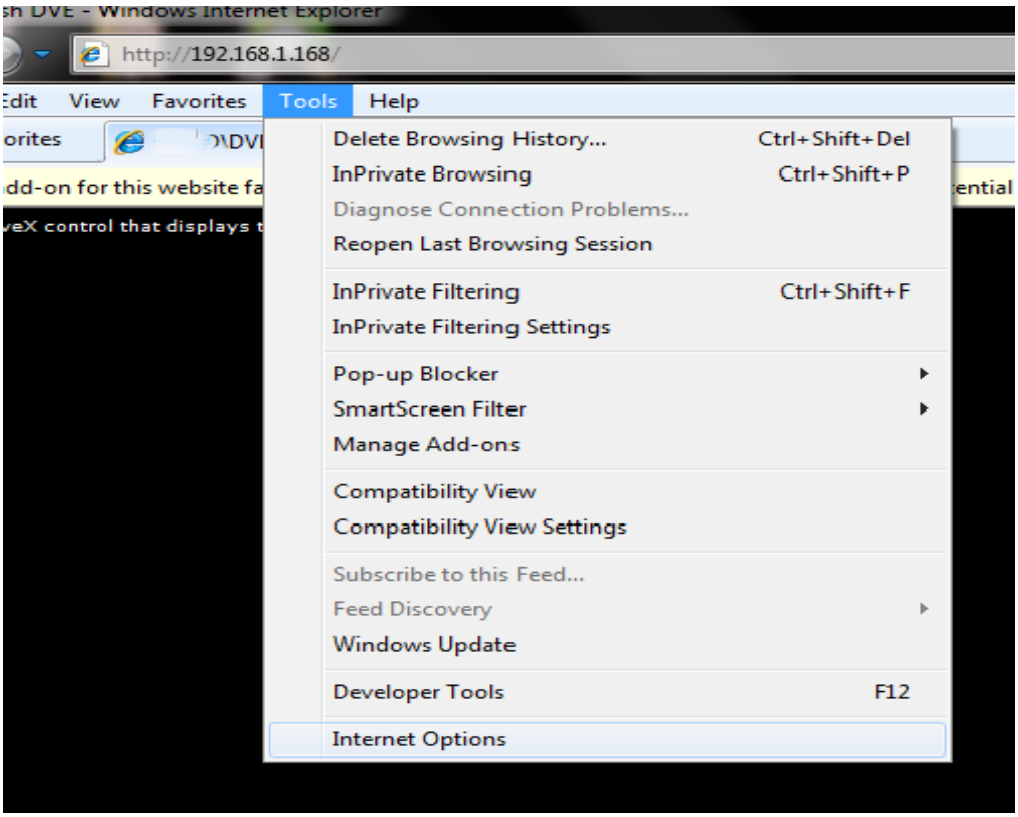
Log In

You can connect to the camera by performing the following steps:
Enter the **http://192.168.1.168**URL in the web browser as shown below to access the GUI.



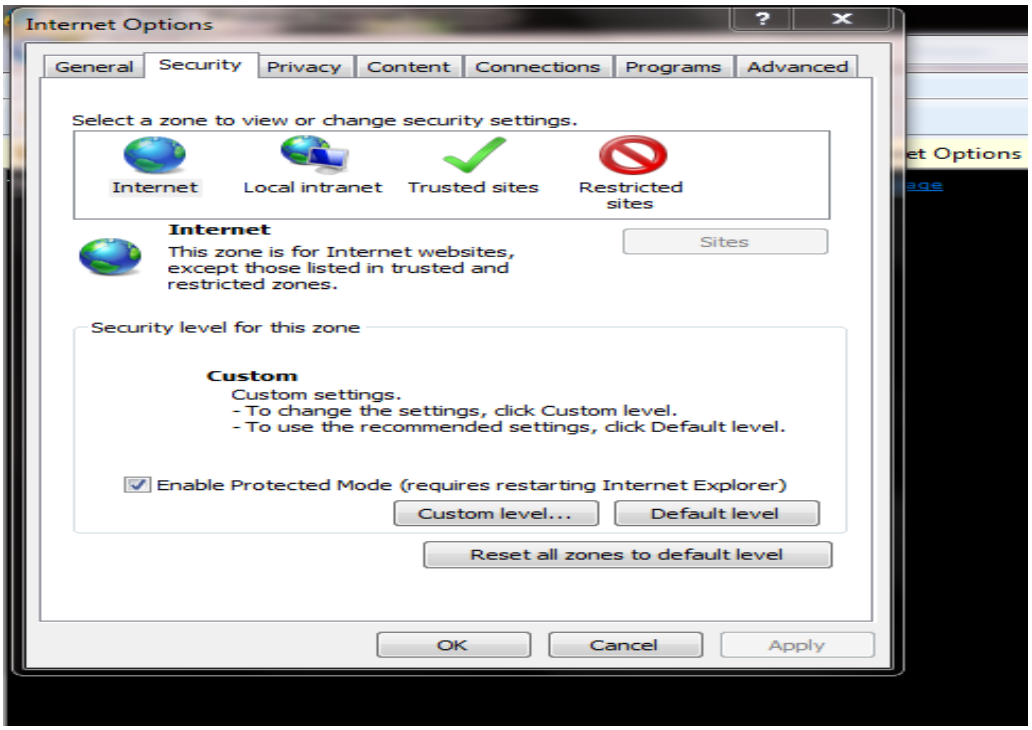
If the Active X is not installed then it shows an add-on for this website failed to run. Perform the following steps to enable the Active X control:

a) Click on tools in the menu bar then click on internet options.



© 2013 RadiumBoards
All Rights Reserved

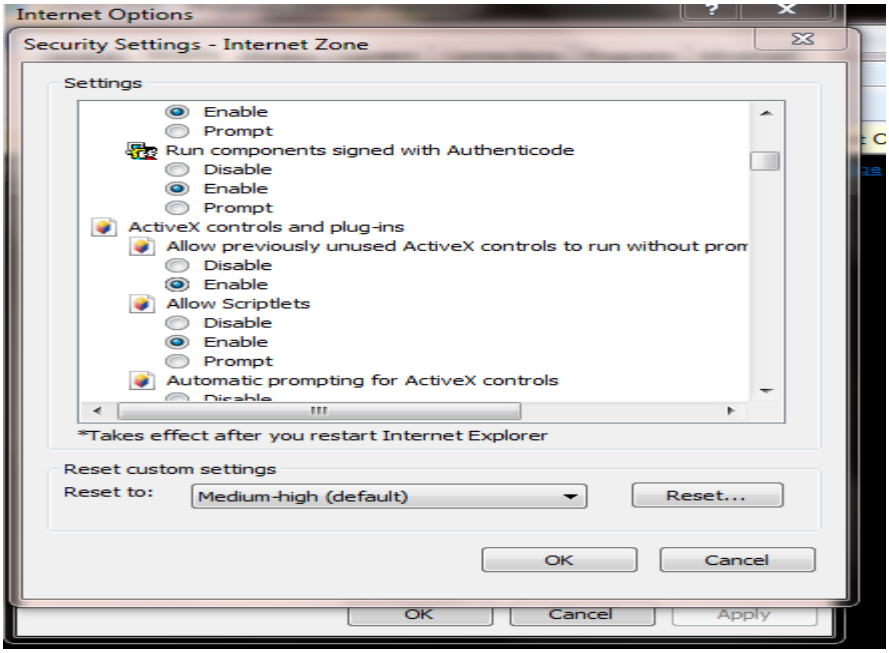
When the dialog box opens, click on the **Security** tab.



b) Then click on custom level.

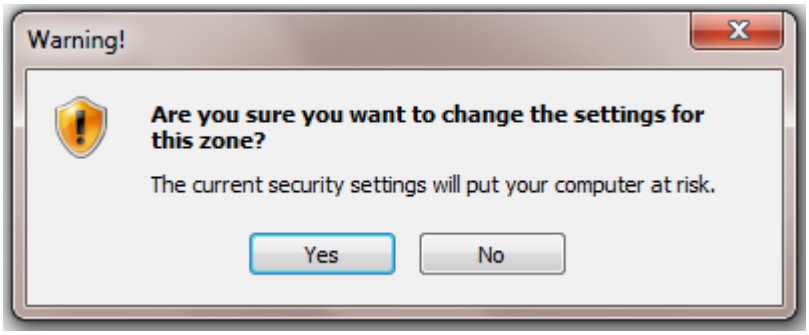
Then a security setting – internet zone dialog box will open,

c) Then enable all the Active X controls and plug-in.



d) After enabling all the Active X controls click on ok .then a dialog box open, click on yes.

© 2013 RadiumBoards
All Rights Reserved



Then again enter the **http://192.168.1.168**URL in the web browser to access the GUI.

Then a login page opens.
Enter **user name** as **admin** and **password** as **admin**.
Click on **login**.

The default page (known as the Live View page) appears displaying the live video. The following options appear in the Live View page:

1) Zoom in: The zoom in button enables you to zoom in the live video as you can enlarge the view of an object to show more details.
2) Zoom out: The zoom buttons enables you to zoom from the live video.
3) Video Recording: The video recording button enables you to record the live video in the local computer and the video is saved in My Videos.
4) Snap shot: The snap shot button enable you to take the snap shot of the live video by clicking on the snapshot button and the snapshot is saved in My Pictures.
5) Alarm off: The alarm off button enables you to stop the continuous audio out.

IMPORTANT NOTES:

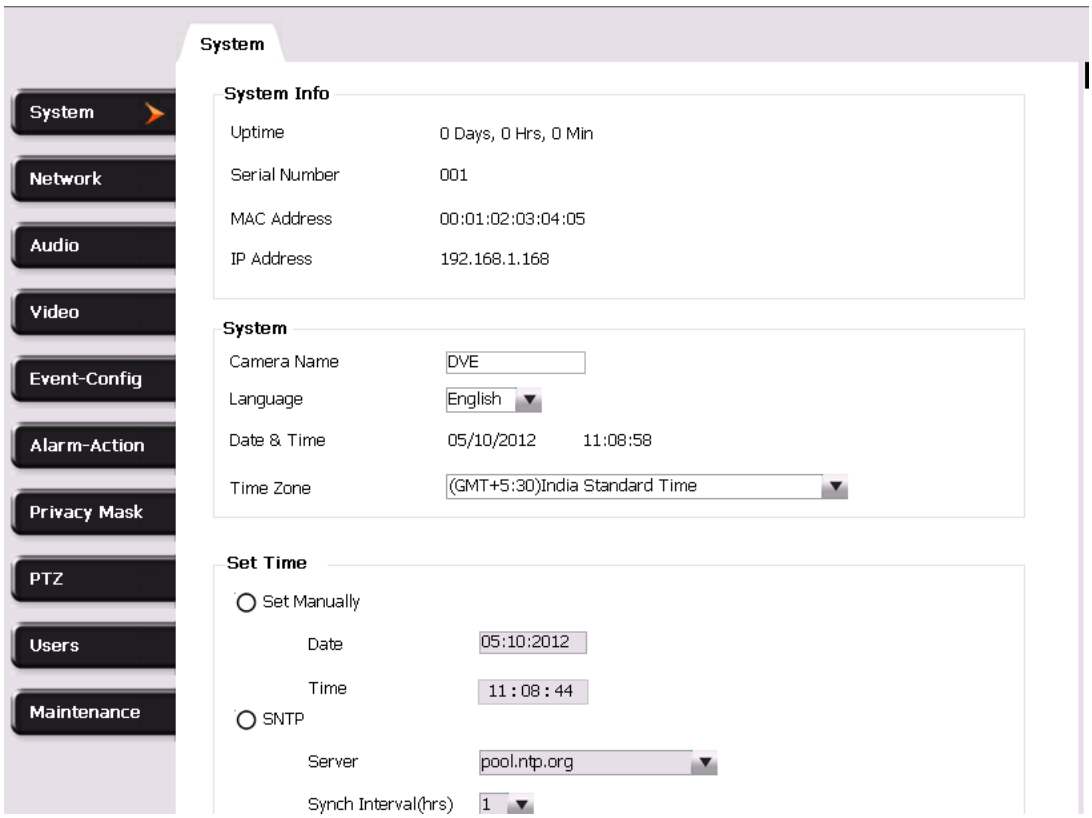
- For Recording and Snapshot buttons to work, Internet Explorer should be run as an Administrator.
- In case of video recording and snapshot on Client side, if My Videos and the My Picture folder are not present in the system then they will be stored on the desktop.
- For accessing HELP on the web page the Pop up Blocker should be disabled.

© 2013 RadiumBoards
All Rights Reserved

Accessing the Configuration

You can configure and change the default settings of the camera by accessing the configuration in the Live View page. The menu further lists the basic and advanced configuration options.

Follow the below steps to access the configuration menu page:
Click **configuration** in the Live View page. The Basic Configuration page appears displaying the navigation panel on the left side.



The navigation panel contains the following options:

- System
- Network
- Audio
- Video
- Event-config
- Alarm-action
- Privacy-mask
- PTZ
- Users
- Maintenance

You can view and configure the sub-menus by clicking the respective configure menu as shown above.

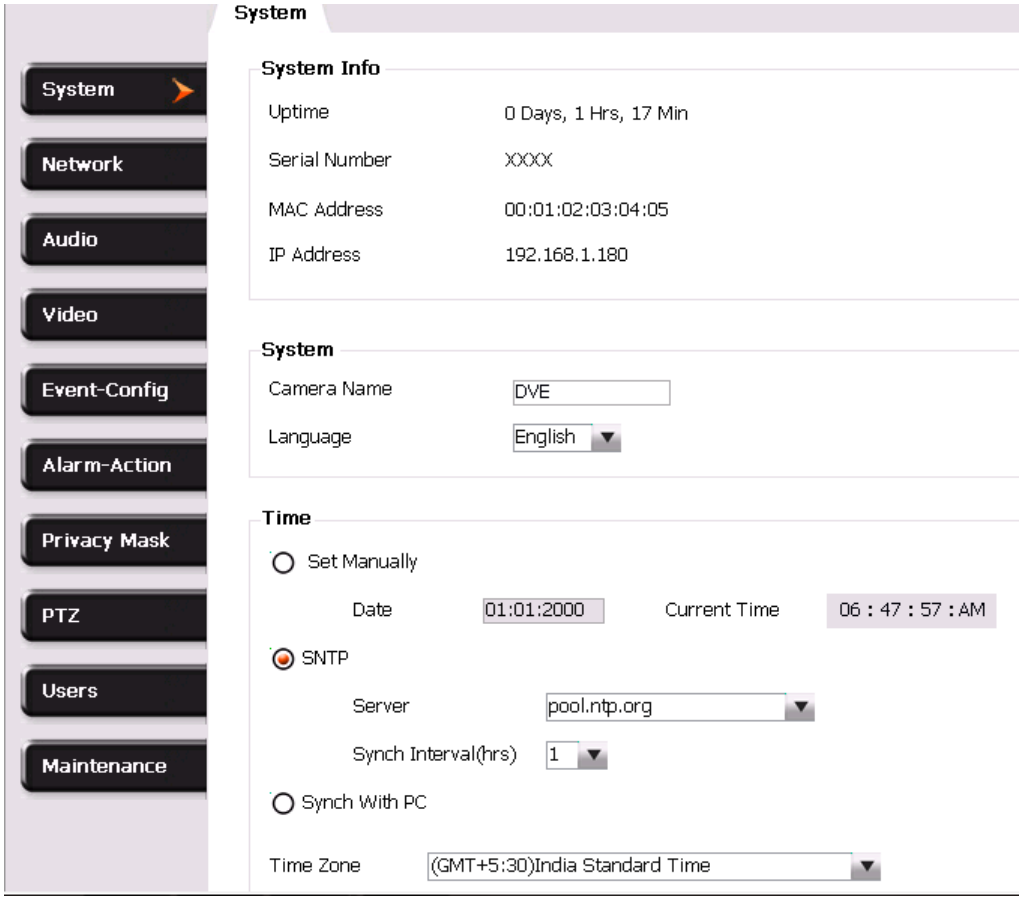
© 2013 RadiumBoards
All Rights Reserved

5. CONFIGURE SYSTEM SETTINGS

The system configuration displays all the system information and you can configure SYSTEM settings by performing the following steps:

- Log in to the network camera to open its Live View page.

Click the **Configuration** menu.
In the left pane, expand the **System Settings** menu.



Uptime: Indicates the uptime duration from which the DVE is connected.
Serial No.: Specifies the serial number of the DVE.
MAC address: Specifies the MAC address of the DVE.
IP address: Specifies the IP address of the network used by the camera to connect to that network. IP addresses allow all the connected computers / devices to find each other and to pass data backward and forward. If you have enabled DHCP, the IP address is assigned dynamically and automatically by DHCP.
Camera name: Change the camera name by simply clicking on the text field and typing the new name and then click on apply button at the bottom.
Language: Change the preferred language by clicking on the drop down button and selecting the particular language you want to select and click on apply button.

© 2013 RadiumBoards
All Rights Reserved

Configure Date and Time Settings

Customize the date and time format to suit your needs while configuring system settings. It allows the GUI and email alerts to set time and date according to the user-defined date and time.

a) **Set manually:** Manually set the date and time by clicking on the field and set the date and time then click on apply.
b) **SNTP:** Specifies the SNTP server URL address configured in the SNTP Server Setting page.
c) **Sync with PC:** Synchronize the date and time of the DVE with your computer.

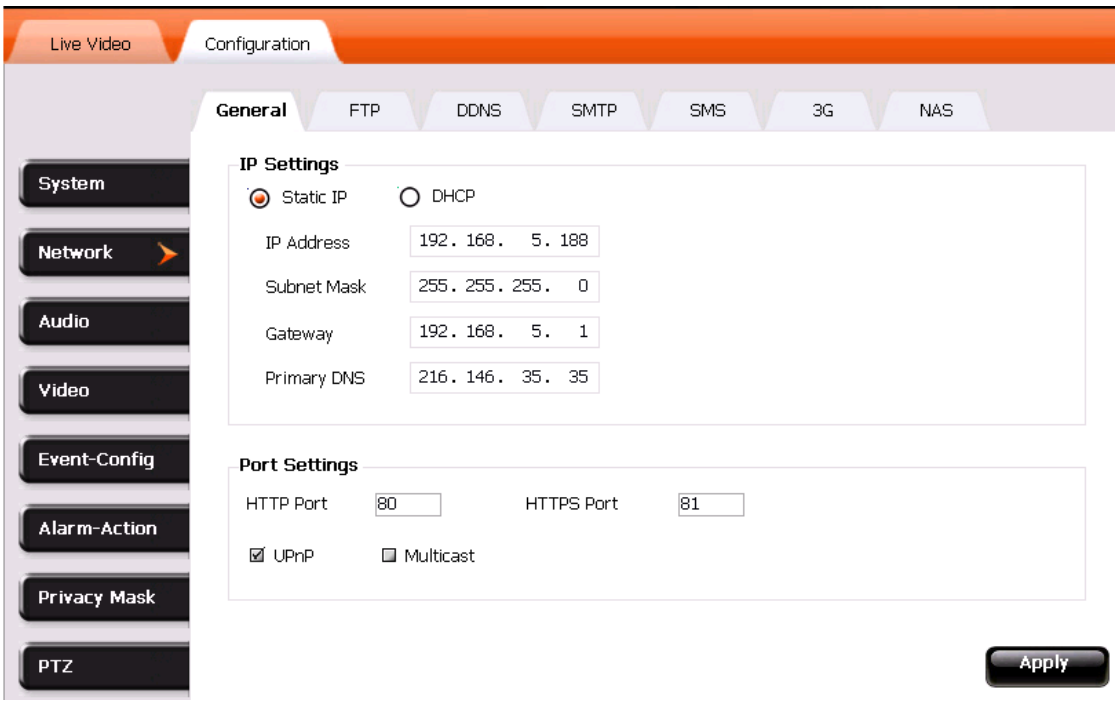
© 2013 RadiumBoards
All Rights Reserved

6. CONFIGURE NETWORK SETTINGS

The network settings allow you to assign an IP address to the camera. This can be done either manually or automatically from a dynamic host configuration protocol (DHCP) server. If you are not using DHCP, provide the IP address, subnet mask, and default gateway of the camera. If you enable DHCP, a DHCP request is sent when the camera is turned on. By default static addressing is enabled.

You can configure NETWORK settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on the **Network Settings** menu.



© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in the Network page:

Table 7 Fields in the Network Settings Menu

Field Name	Description	Values
Enable DHCP	Indicates that you can enable or disable the DHCP. DHCP supports static addressing through a permanent IP address.	-
IP Address	Specifies the IP address of the network used by the camera to connect to that network. IP addresses and allow all the connected computers/devices to find each other and to pass data backward and forward. If you have enabled DHCP, the IP address is assigned dynamically and automatically by DHCP.	Default: 192.168.1.168
Subnet mask	Specifies the subnet mask or routing prefix of an address written in a form identical to that of the address itself.	Default: 255.255.255.0
Default Gateway	Specifies the address of the default gateway.	Default: 192.168.1.254
Primary and secondary DNS	Specifies the primary and secondary server used for information about a domain as well as the location of resources associated with a domain.	Default: 192.168.1.1 and 192.168.1.3
HTTP Port	Specifies the communications endpoint for the uniform resource locator (URL) of a website or other services.	Default: 80 Range from 1024 – 65536
HTTPS Port	Specifies the communications endpoint for the uniform resource locator (URL) of a website or other services.	Default: 81 Range from 1024 – 65536
UPnP		
Multicast		

© 2013 RadiumBoards
All Rights Reserved

NOTE: To enter HTTPS port number ranges from 1024 to 6553, you must save the configuration and reboot the DVE.

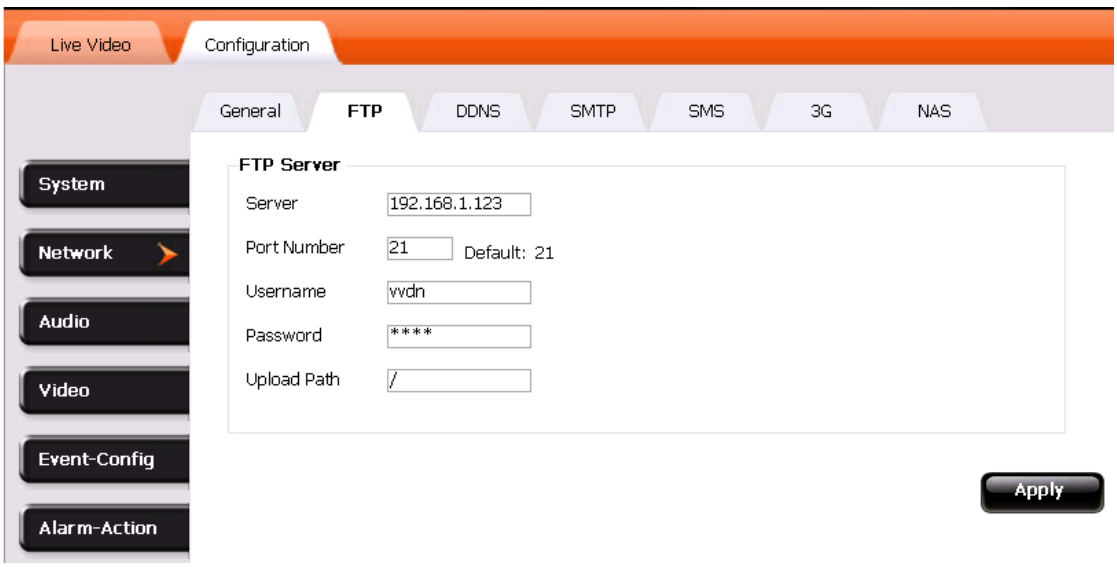
- Provide the desired values.
- Click **APPLY** to save the changes.

Configure FTP Settings

An FTP server can receive snapshot or video file uploaded from the camera. You can add an FTP server to store images or videos.

You may configure FTP settings by performing the following steps:

- Log in to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, expand the **Network Settings** menu and click **FTP**



© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in the FTP Server Setup page:

Table 8 Fields in the FTP Server Setup Page

Field Name		Description	Values
FTP Server	Name	Specifies the name of the FTP server.	-
	Network Address	Specifies the host name or IP address of the FTP server.	-
	Upload Path	Specifies the upload path of the FTP server. Avoid special characters, for example “,<,>,%.	-
	Port Number	Specifies the port number of the FTP server.	-
	File Format	Specifies the file format.	AVI
Login Information	User Name	Specifies the user name.	-
	Password	Specifies the password corresponding to the user name.	-

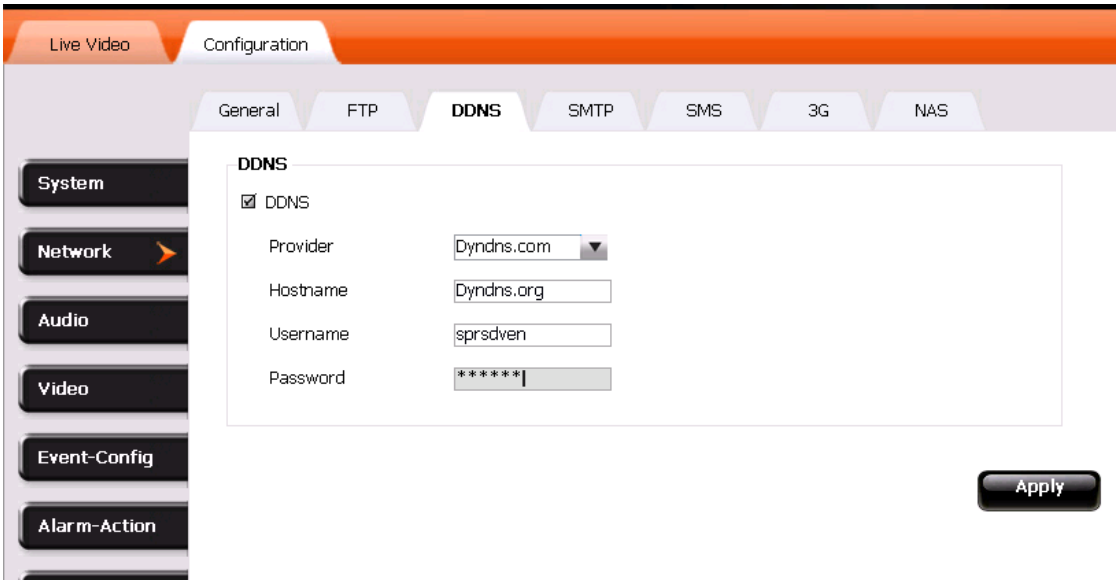
- Provide the desired values.
- Click **APPLY** to save all changes.

Configure DDNS Settings

Dynamic DNS or DDNS is a method of updating, in real time, a Domain Name System (DNS) to point to a changing IP address on the Internet. This is used to provide a persistent domain name for a resource that may change location on the network.
You can configure DDNS settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **configuration** menu.
- In the left pane, expand the **network Settings** menu and click **DDNS**.

© 2013 RadiumBoards
All Rights Reserved



The following table describes the various fields that appear in the DDNS Setting page:

Table 9 Fields in the DDNS Application Setting Page

Field Name	Description
DDNS	Enable or disable the DDNS by check the box
Provider	Specifies the DDNS service provider
Host name	Specifies URL provided by the DDNS service provider.
User name	Specifies the username
password	Specifies the password correspond to the username.

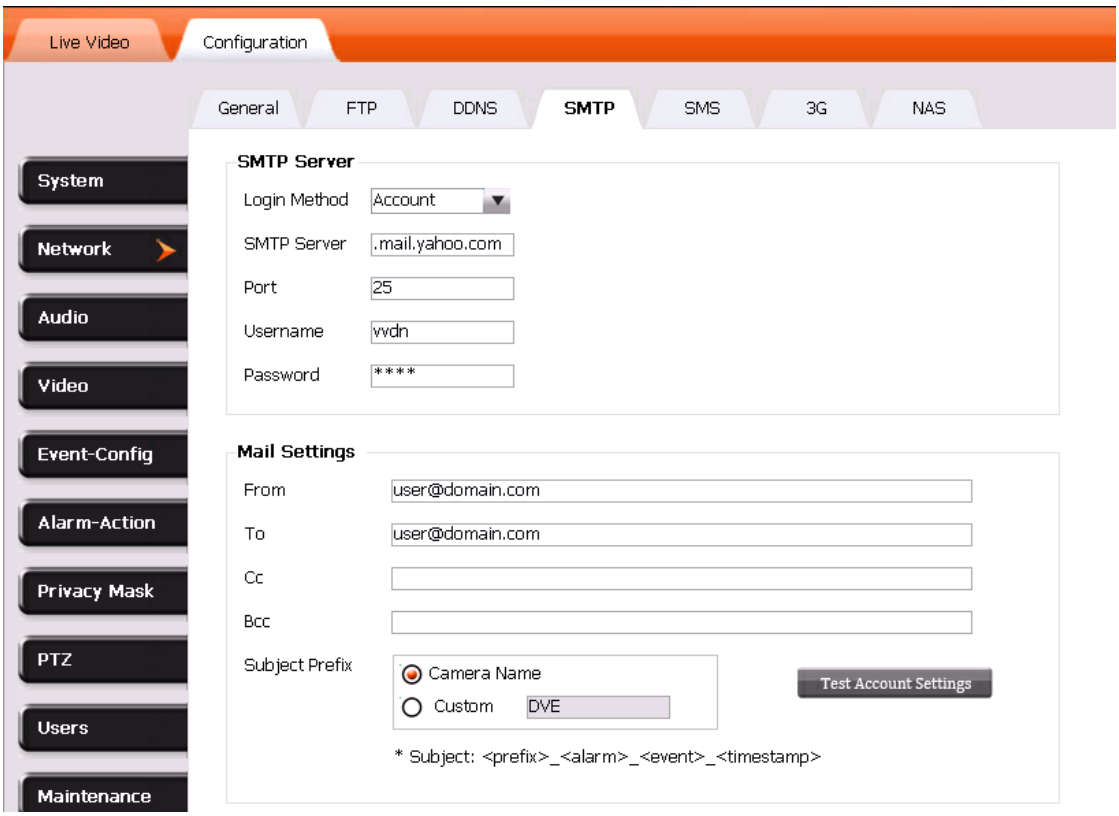
- Provide the desired values.
- Click **APPLY** to save all changes.

Configure SMTP Settings

You can enable sending of emails and notifications from the camera to predefined addresses through SMTP. You can configure SMTP settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **configuration** menu.
- In the left pane, expand the **network Settings** menu and click **SMTP**.

© 2013 RadiumBoards
All Rights Reserved



The following table describes the various fields that appear in the SMTP server and mail Settings page:

Table 10 Fields in the SMTP Application Settings Page

Field Name	Description
Login method	Specifies the login method for sending mails, whether form user account or from anonymous.
SMTP server	Specifies the SMTP server from where the mail is to be sent.
Port	Specifies the port number of the SMTP server.
Username	Specifies the username.
Password	Specifies the password correspond to the username.
Mail from	Specifies the Email ID from where the mail is to be sent.
Mail to	Specifies the Email IDs to whom the mail is to be sent.
Subject prefix	Specifies the prefix like: Subject:<prefix>_<alarm>_<event>_<timestamp>

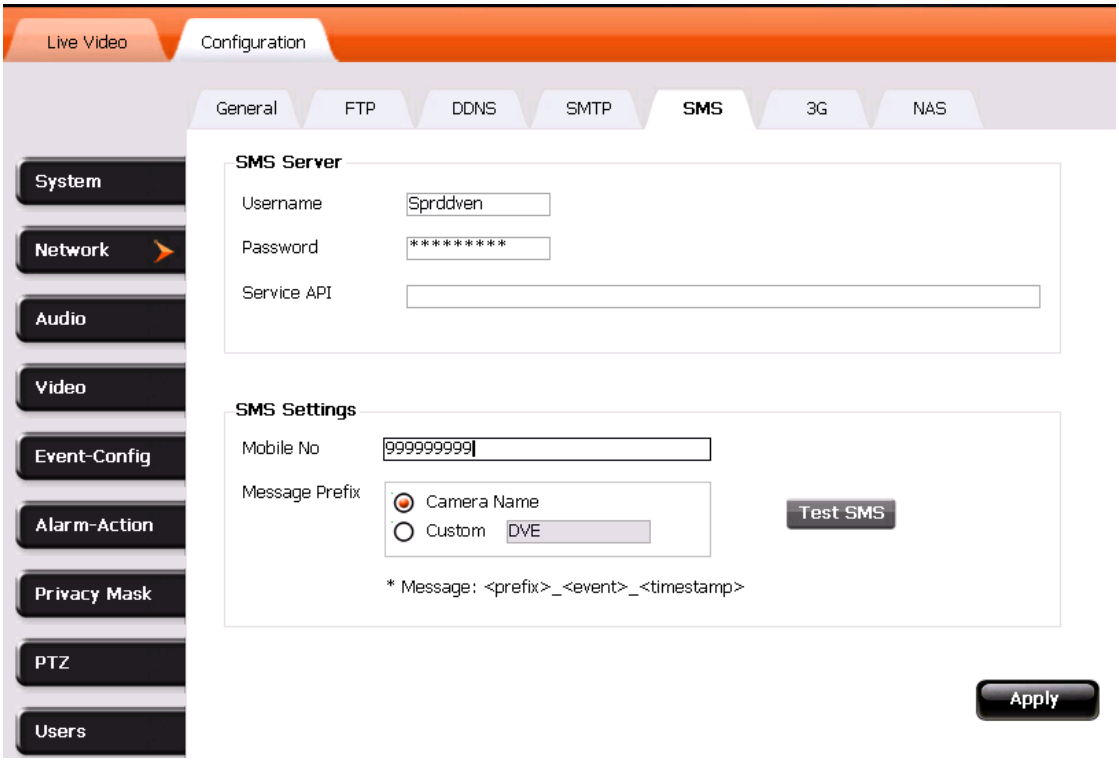
© 2013 RadiumBoards
All Rights Reserved

- Provide the desired values.
- Click **APPLY** to save all changes.

Configure SMS Settings

You can enable sending of SMS and notifications from the camera to predefined mobile number through SMS.You can configure SMS settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, expand the **Network Settings** menu and click **SMS** .



© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in the SMS server and Setting page:

Table 11 Fields in the SMS Settings Menu

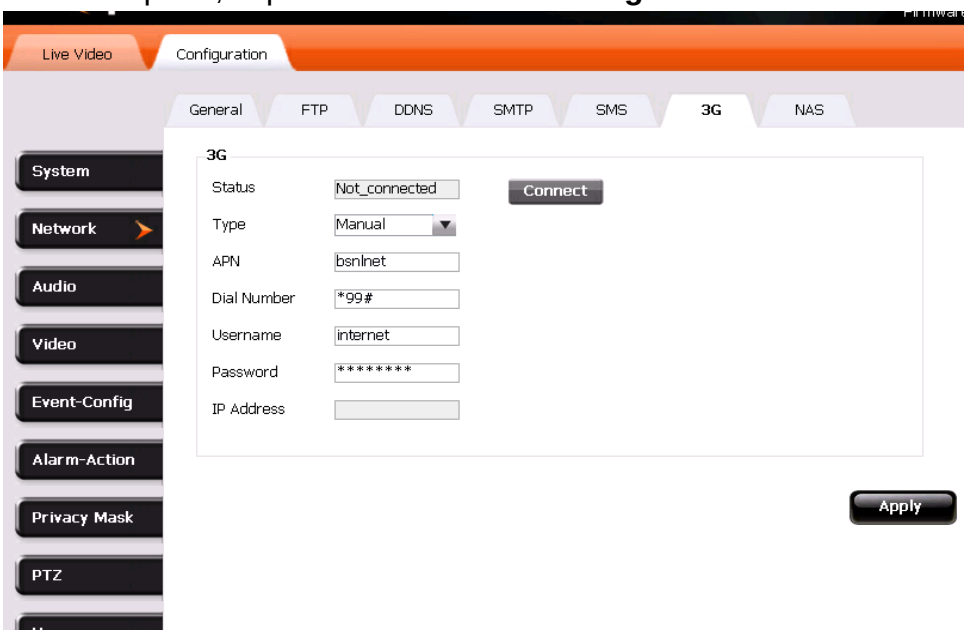
Field Name	Description
Username	Specifies the username
Password	Specifies the password correspond to the username
Service Api	Specifies the following http://sms.foosms.com/pushsms.php?username=|USERNAME|&password=|PWD|&sender=|DVE|&to=|TO|&message=|MESSAGE|
Mobile No.	Specifies the mobile no to which the SMS is to be sent.
Message prefix	Subject:<prefix>_<alarm>_<event>_<timestamp>

- Provide the desired values.
- Click **APPLY** to save all changes.

CONFIGURE 3G SETTING

You can configure 3G settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, expand the **Network Settings** menu and click **3G.**



© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in the 3G Setting page:

Table 12 Fields in the SMS Settings Menu

Field Name	Description
Status	Specifies the status of the 3G weather it is connected, not connected or reconnecting.
Type	Specifies the type of connectivity (Manual or Auto), select the type from the drop down list.
APN	Specifies the APN for the different devices.
Dial number	- Specifies the Dial number for the different devices.
Username	Specifies the user name for the particular device.
Password	Specifies the password correspond to the user name
IP Address	Specifies the IP Address assign to the DVE by the USB 3G device.

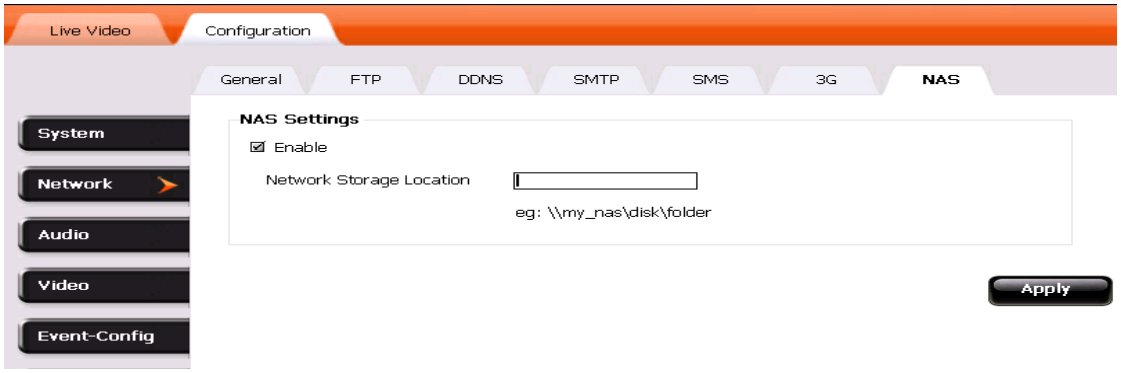
- Provide the desired values.
- Click **APPLY** to save all changes.

CONFIGURE NAS SETTING

Network-attached storage (NAS) is file-level computer data storage connected to a network providing data access to a heterogeneous group of clients. NAS not only operates as a file server, but is specialized for this task either by its hardware, software, or configuration of those elements

You can configure NAS settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, expand the **Network Settings** menu and click **NAS.**



© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in the NAS Setting page:

Table 13 NAS Settings Page

Field Name	Description
NAS enable	Enable or disable the NAS by check or uncheck the box
Network Storage Location	Specifies the network storage location as server name or server IP followed by directory to be mounted. For e.g. <ip-address>:/mount directory

- Provide the desired values.
- Click **APPLY** to save all changes.

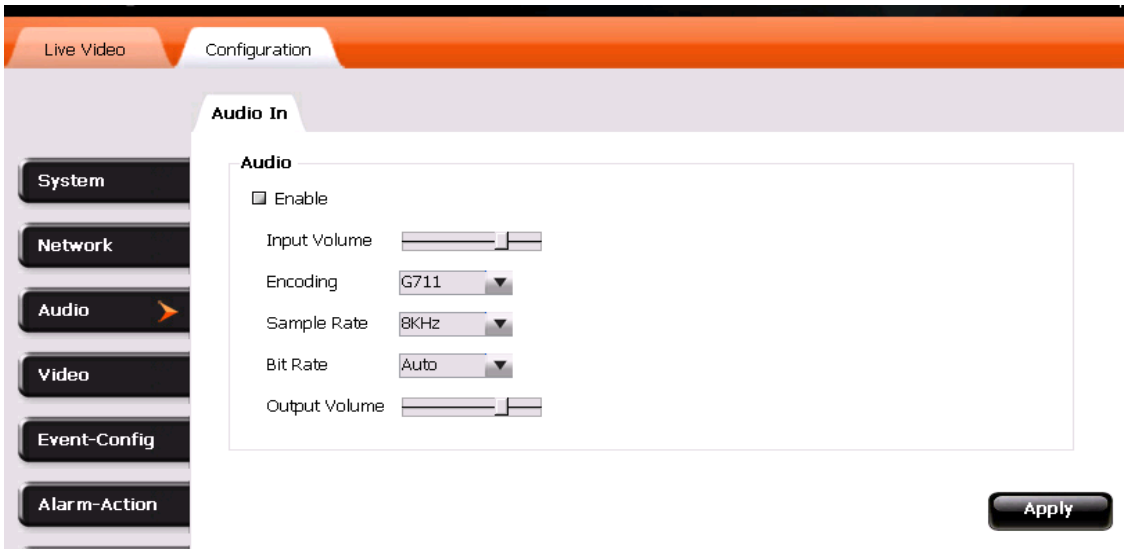
7. CONFIGURE AUDIO SETTINGS

This section describes how to configure and turning the audio mechanism of the camera on/off automatically. IP camera plays a built-in sound file on local site when alarming, and the volume is controlled here.

You can configure audio settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configure** menu.
- In the left pane, expand the **Audio Settings**.

Figure 6: The Audio Settings Page



© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in the Audio Setting page.

Table 14 Fields in the Audio Setting Page

Field Name	Description	Values
Audio Enable	Specifies whether the camera audio is enable or not.	ON/OFF
Input volume	Specifies the input sound volume range	
Encoding	Specifies the encoding format of the audio.	AAC-LC / G711
Sample rate	Specifies the sample rate for the audio.	8KHz / 16KHz
Bit rate	Specifies the bit rate of the audio.	Auto / 32Kbps
Output volume	Specifies the output sound volume range.	

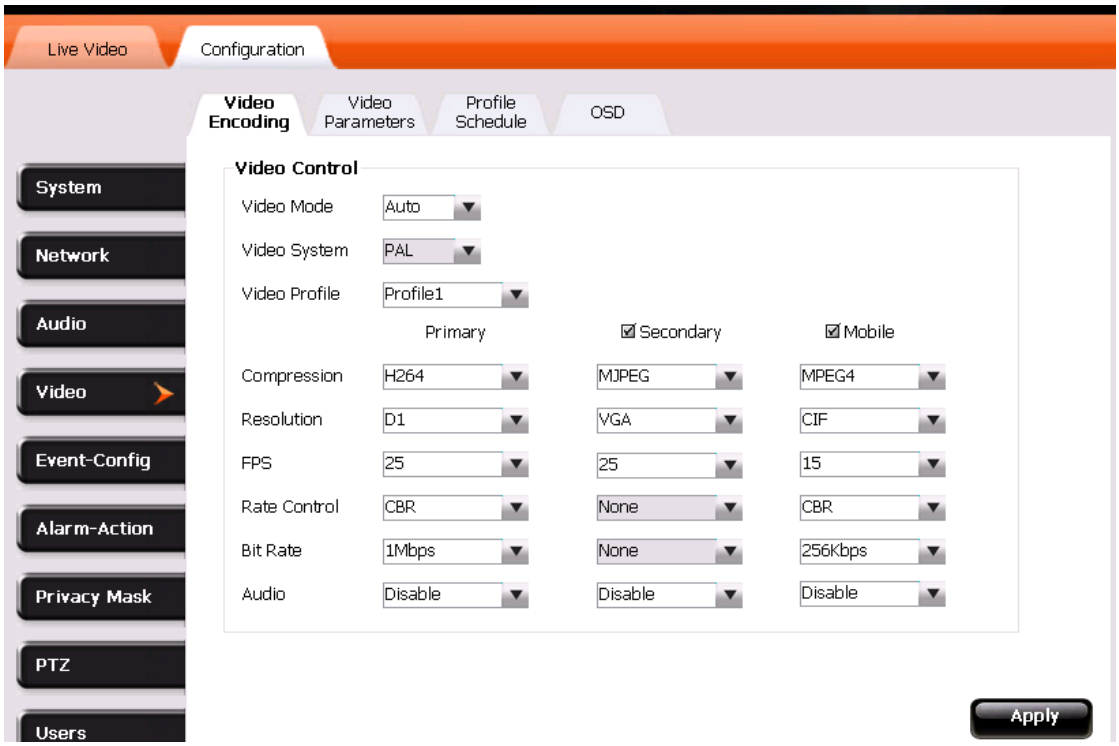
- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

8. CONFIGURE VIDEO SETTINGS

You can configure the video settings such as video encoding and video parameters by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on the video **Settings**.



You can configure the video encoding and video parameters and OSD by click on the video encoding and video parameters button in the video setting menu bar.

© 2013 RadiumBoards
All Rights Reserved

Video Encoding

The following table describes the various fields that appear in the video encoding page:

Table 15 Fields in the Video Encoding Page

Field Name	Description	Values
Video mode	Specifies the type of video mode	Auto/ manual
Video system	Specifies the video system format	NTSC / PAL
Video profile	Specifies the different profile for different video stream	Profile 1 to profile 5
Streams	Specifies thee different stream which can be enable / disable.	Primary, Secondary , Mobile
Compression	Specifies the different compression level which affects the amount of bandwidth required.	H264/MJPEG/ MPEG4.
Resolution	Specifies the different resolution for the video.	Stream resolution
FPS	Specifies the different frequency for the image.	5 to 25
Rate control	You can choose constant code stream(CBR) or variable code stream(VBR)	CBR/VBR
Bit rate	Specifies the no of bits that can be processed per unit time.	64Kbps to 5Mbps
Audio	You can enable or disable the audio for the particular stream	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

Video Parameters

The following table describes the various fields that appear in the video parameters page:

Table 16 Fields in the video parameters Page

Field Name	Description	Values
Iris level	Use the iris bar for increase or decrease the iris level.	
Mirroring	Specifies the type of mirroring.	Horizontal, vertical, both.

- Provide the desired values.
- Click **APPLY** to save all changes.

Profile Scheduler

The following table describes the various fields that appear in the Profile Scheduler page:

Table 17 Fields in the Profile Scheduler Page

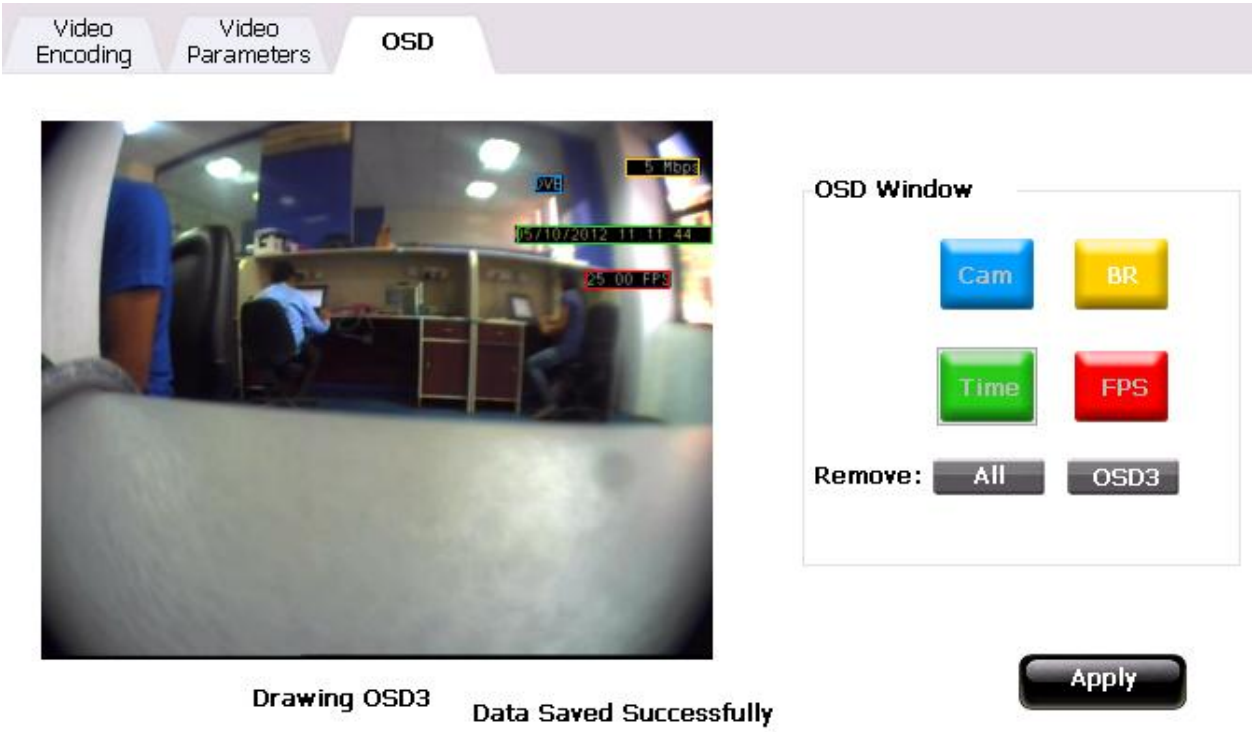
Field Name	Description	Values
Day start/end time	Specifies start and end time for particular set video profile, rest of the time will be considered as night time	
Holiday	Specifies two holidays, on holiday night profile will run	
Day time video profile	Select any video profile for day time	
Night time video profile	Select any video profile for night time	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

OSD

The on-screen display (OSD) option allows you to create a custom text message and place it nearly anywhere on the video screen.



The following table describes the various fields that appear in the OSD Settings page:

Table 18 Fields in the OSD Settings Page

Field Name	Description	Values
Enable Date and Time Stamp	Indicates whether to insert the date and time stamp in the image or video.	-
Camera name	Indicate the camera name	
Bit rate	Indicate the bit rate	
FPS	Indicate the frame per sec .	

- Provide the desired values.
- Clicks **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

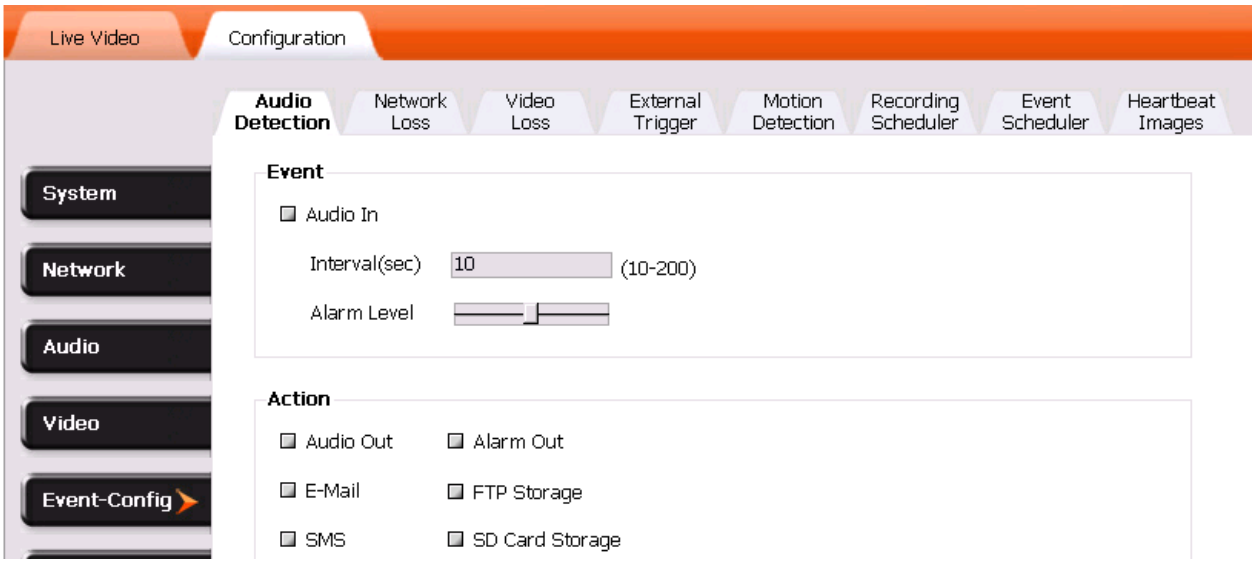
9. EVENT CONFIGURATION

This section describes how to configure the camera to perform certain actions when events occur. Actions such as audio detection, Ethernet loss, video loss, motion detection, etc. can trigger an event such as alarm out, audio out, etc. You can configure actions to trigger the event.

You can configure event config such as audio detection, video loss etc by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on the **Event-Config**.

You can configure different events by clicking on the different button on the event-config menu bar.



© 2013 RadiumBoards
All Rights Reserved

Audio Detection

The following table describes the various fields that appear in the Audio Detection Setup page:

Table 19 Fields in the Action Types Setup Page

Field Name	Description	Values
Audio detection	You can enable / disable the audio detection by check the box.	Enable/disable
Interval (sec)	You can just click the box and can change any value between 10 to 200.	10 - 200
Alarm level	The alarm level can be set by using the level bar.	
Enable FTP upload	Indicates whether to enable FTP upload feature or not.	
Audio Out Enabled	Indicates whether to enable audio sound or not.	
Alarm Out Enabled	Indicates whether to enable alarm out or not.	
Save to SD Card	Indicates whether to save to SD card or not.	
Enable Email (SMTP)	Indicates whether to enable email notification feature or not.	
Enable SMS	Indicates whether to enable SMS notification or not.	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

Network Loss

The following table describes the various fields that appear in the Network loss Setup page:

Table 20 Fields in the Action Types Setup Page

Field Name	Description	Values
Network loss	You can enable / disable the network loss by check the box.	Enable/disable
Interval (sec)	You can just click the box and can change any value between 10 to 200.	10 - 200
Alarm level	The alarm level can be set by using the level bar.	
Save to SD Card	Indicates whether to save to SD card or not.	
Audio Out Enabled	Indicates whether to enable audio sound or not.	
Alarm Out Enabled	Indicates whether to enable alarm out or not.	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

Video Loss

The following table describes the various fields that appear in the video loss Setup page:

Table 21 Fields in the Action Types Setup Page

Field Name	Description	Values
Video loss	You can enable / disable the video loss by check the box.	Enable/disable
Interval (sec)	You can just click the box and can change any value between 10 to 200.	(10 -200)
Enable FTP upload	Indicates whether to enable FTP upload feature or not.	
Audio Out Enabled	Indicates whether to enable audio sound or not.	
Alarm Out Enabled	Indicates whether to enable alarm out or not.	
Save to SD Card	Indicates whether to save to SD card or not.	
Enable Email (SMTP)	Indicates whether to enable email notification feature or not.	
Enable SMS	Indicates whether to enable SMS notification or not.	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

External Trigger

The external trigger is enabled by using ALARM IN and GND pins.

Figure 7 External Trigger

The following table describes the various fields that appear in the Actions Type Setup page:

Table 22 Fields in the Action Types Setup Page

Field Name	Description	Values
External trigger	You can enable / disable the external trigger by check the box.	Enable/disable
Interval (sec)	You can just click the box and can change any value between 10 to 200.	(10 -200)
Enable FTP upload	Indicates whether to enable FTP upload feature or not.	
Audio Out Enabled	Indicates whether to enable audio sound or not.	
Alarm Out Enabled	Indicates whether to enable alarm out or not.	
Save to SD Card	Indicates whether to save to SD card or not.	
Enable Email (SMTP)	Indicates whether to enable email notification feature or not.	
Enable SMS	Indicates whether to enable SMS notification or not.	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

Motion Detection

The following table describes the various fields that appear in the video loss Setup page:

Table 23 Fields in the Action Types Setup Page

Field Name	Description	Values
Motion detection	You can enable / disable the motion detection by check the box. You can select all or remove all windows by selecting the appropriate radio button on the panel.	Enable/disable
Interval (sec)	You can just click the box and can change any value between 10 to 200.	(10 -200)
Sensitivity	The detection sensitivity can be adjusted by selecting from the sensitivity bar.	
Enable FTP upload	Indicates whether to enable FTP upload feature or not.	
Audio Out Enabled	Indicates whether to enable audio sound or not.	
Alarm Out Enabled	Indicates whether to enable alarm out or not.	
Save to SD Card	Indicates whether to save to SD card or not.	
Enable Email (SMTP)	Indicates whether to enable email notification feature or not.	
Enable SMS	Indicates whether to enable SMS notification or not.	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

Recording Scheduler

This page allows you to configure to continuous save video to SD card or FTP storage or NAS. To create or modify the scheduler click on the add/edit button.

The following table describes the various fields that appear in recording schedule page:

Table 24 Fields in the Recording Schedule Page

Field Name	Description	Values
Days	Specify the days of the week the recording will be active	Monday to Sunday
Start time/End time	Specifies the hour and minute for the start and end times (hh:mm).	
Status	Specifies the hour and minute for the start and end times (hh:mm).	

- Provide the desired values.
- Click **APPLY** to save all changes.

Event Scheduler

This feature enables you to schedule the Events, means the duration of the day a particular

Alarm will be enabling. To create or modify the event scheduler click on the add/edit button.

The following table describes the various fields that appear in event schedule page:

Table 25 Fields in the Event Schedule Page

Field Name	Description	Values
Days	Specify the days of the week the recording will be active	Monday to Sunday
Start time End time	Specifies the hour and minute for the start and end times (hh:mm).	
Status	Specifies the hour and minute for the start and end times (hh:mm).	

© 2013 RadiumBoards
All Rights Reserved

- Provide the desired values.
- Click **APPLY** to save all changes.

Heartbeat Images

Keep alive mechanism to ensure camera operation and up time.

The following table describes the various fields that appear in heartbeat image page:

Table 26 Fields in the Heartbeat Image Page

Field Name	Description	Values
Snapshot	you can enable/disable the camera to capture snapshot at regular interval	
Snapshot duration	Specifies the time interval between each snapshot.	1 – 60 min
Snapshot interval	Specifies the interval at which the snapshot is to be taken	10 -60 sec
No. of snapshot	Specifies the number of snapshot to be taken at occurrence tim	
ACTION Save to SD Card	Indicates whether to save to SD card or not.	
Enable Email (SMTP)	Indicates whether to enable email notification feature or not.	
Enable FTP upload	Indicates whether to enable FTP upload feature or not.	

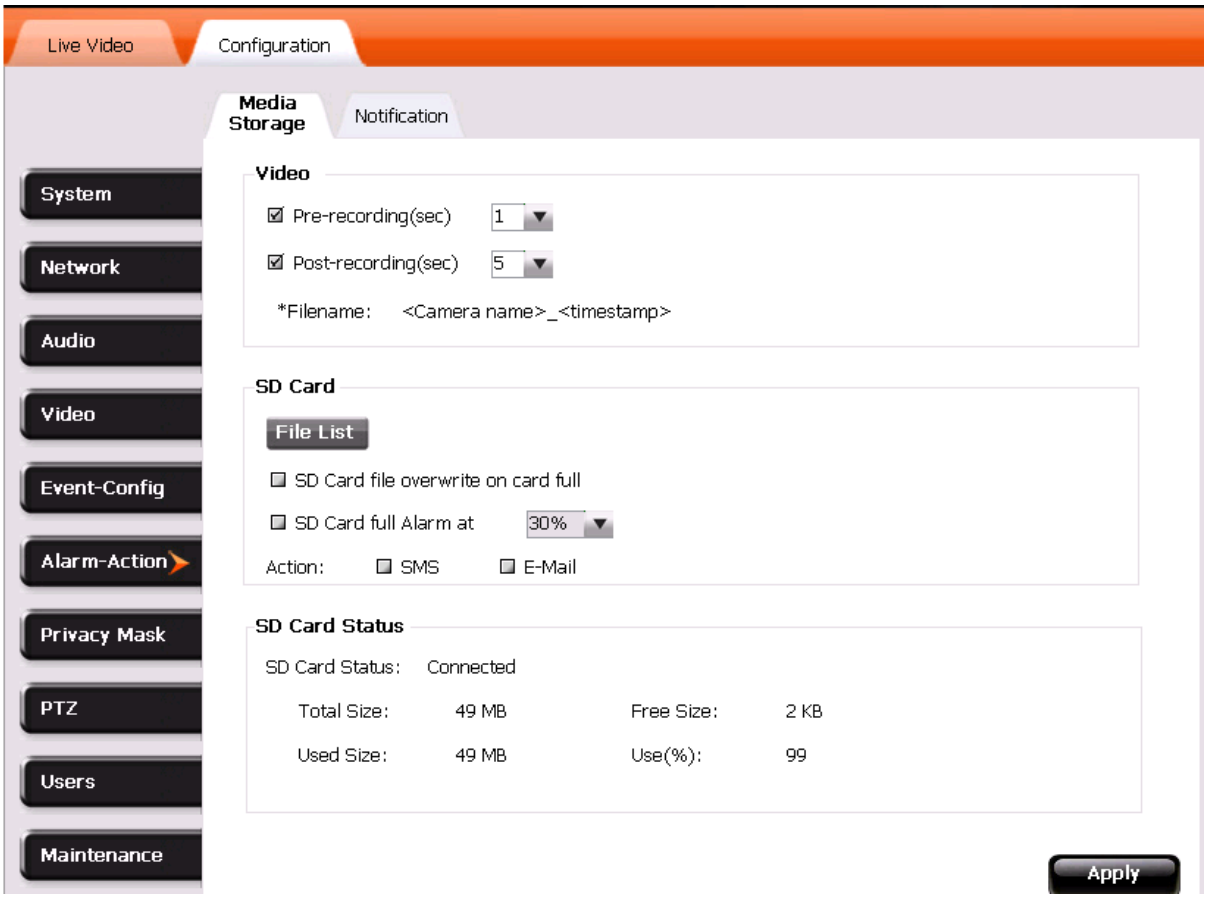
- Provide the desired values.
- Click APPLY to save all changes.

© 2013 RadiumBoards
All Rights Reserved

10. ALARM ACTION

You can configure alarm action such as media storage and notification by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on the **Alarm Action**.



You can configure the media storage and notification by clicking on button in the alarm action menu bar.

© 2013 RadiumBoards
All Rights Reserved

Media Storage

The following table describes the various fields that appear in media storage page:

Table 27 Fields in the Media Storage Page

Field Name	Description	Values
Pre/Post – Recording (sec)	The pre/post recording can be enable or disable by check/clear the box. Pre/Post alarm video recording durationis selected from the drop-down list.	Pre recording 1-3 sec Post
SD File list	Specifies the files lists in the SD card	
SD File overwrite	Enables you to overwrite the file in the SD card.	
SD card full alarm	Configure alarm for SD card full status , you can select the diff level	30-90 %
ACTION Enable Email (SMTP)	Indicates whether to enable email notification feature or not	
Enable SMS	Indicates whether to enable SMS notification or not.	
Status	Specifies the status of the SD card	

- Provide the desired values.
- Click **APPLY** to save all changes.

© 2013 RadiumBoards
All Rights Reserved

Notification

The following table describes the various fields that appear in media notification page

Table 28 Fields in the Notification Page

Field Name	Description	Values
Audio file	Specifies the audio file which will play at the time of audio out.	Audio1 to audio5
Test	Play the selected audio file	
Repeat	It can be used to add Repetition cycle for the audio file	(0) means continues.
Alarm out (sec)	Specifies the duration of the alarm out	5 to 120
FTP upload format	Specifies the file type to be uploaded	Image/ Video

- Provide the desired values.
- Click **APPLY** to save all changes.

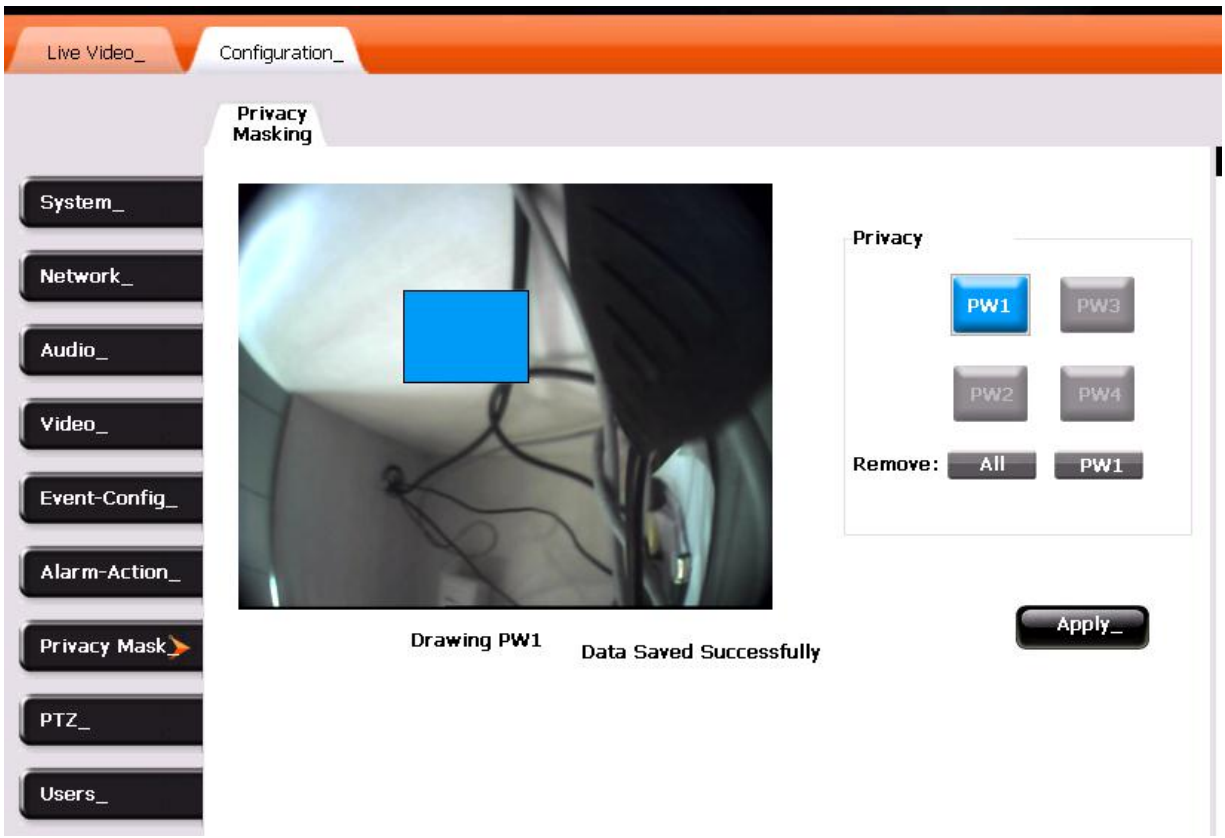
© 2013 RadiumBoards
All Rights Reserved

11. PRIVACY MASKING

Privacy masks are configurable areas of solid color that allow concealment of parts of the image that should not be viewable.

You can configure Privacy masking by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on the **Privacy Masking**.



User can mask the video by clicking any of the (PW 1 -4) button windows shown on the snapshot frame window where the user can resize , drag , overlap the privacy masking windows After pressing apply button the privacy mask windows are set on the encoder and all the streams from the camera start showing the privacy masking windows.
The privacy masking zones in the windows can support up to 4 zones only, that can be resized/overlap to a particular dimension.

Remove: To remove the particular privacy mask zone by selecting it from the button panel and click on remove button and to remove all the privacy masked zones click on remove all.

- Provide the desired values.
- Click **APPLY** to save all changes.

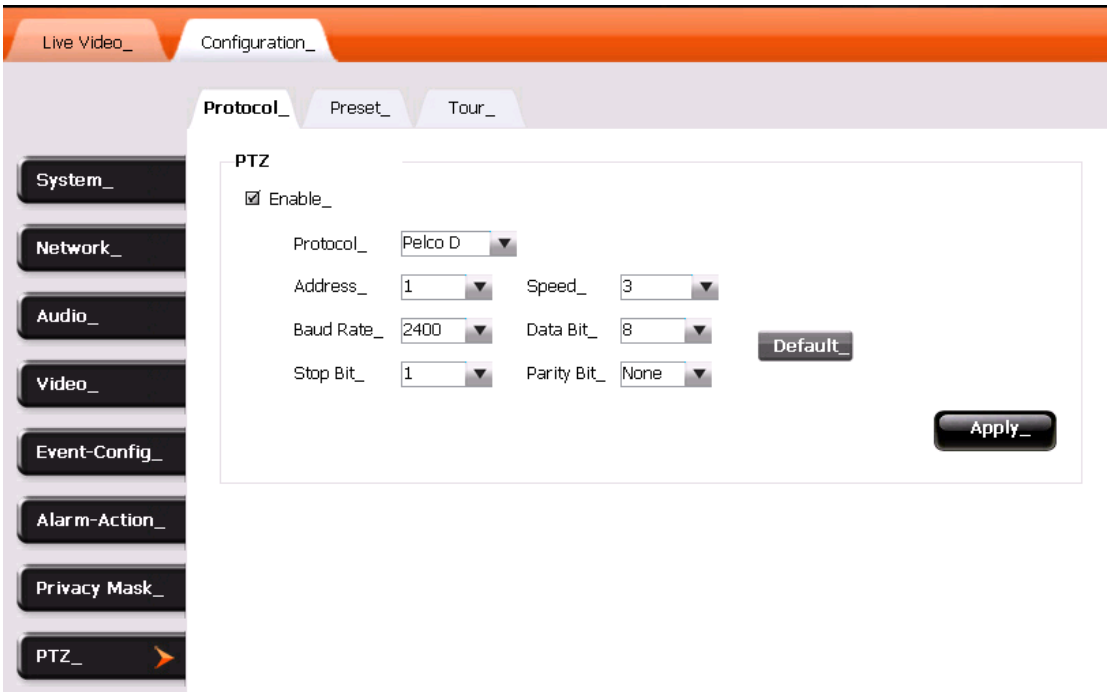
© 2013 RadiumBoards
All Rights Reserved

12. PTZ

The Pan / Tilt / Zoom (PTZ) menu allows users to pan(move left and right), tilt (move up and down), and zoom in and out a specific area with just a push of a button and preset positions.

You can configure Pan/Tilt/Zoom settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on **PTZ**.



© 2013 RadiumBoards
All Rights Reserved

Protocol

The following table describes the various fields that appear in PTZ protocol page.

Table 29 Fields in the Protocol Page

Field Name	Description	Values
PTZ enable	User can enable / disable the PTZ control.	
Protocol	Specifies the corresponding dome protocol	Pelco P, Pelco D
Address	Specifies the corresponding dome address	Default 1 (1 to 255)
Baud rate	Specifies the corresponding dome baud rate length.	1200, 2400, 4800, 9600
Speed	Specifies the corresponding dome movement speed	1 to 8
Data , stop , parity bit	Specifies the data , stop and parity bit	Stop bit 1-2 Data bit 7-8 Parity bit (none, odd ,even)
Default	Set the default PTZ controls	

- Provide the desired values.
- Click **APPLY** to save all changes.

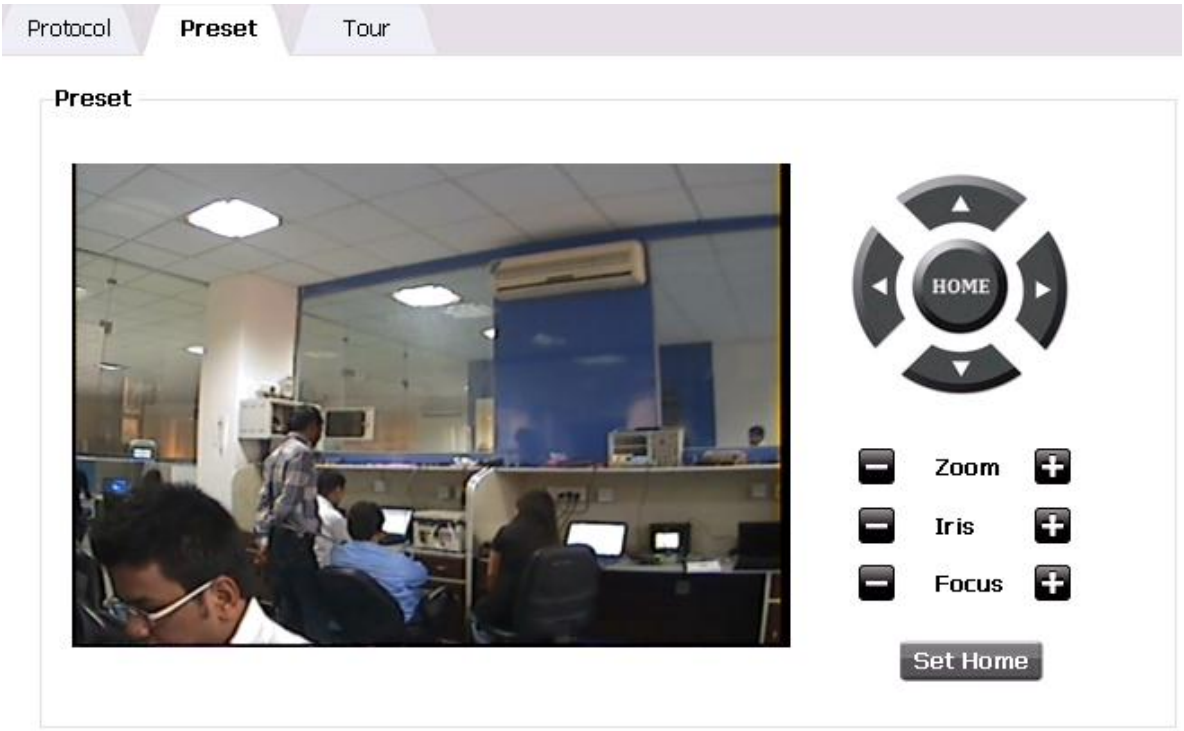
NOTE: For Custom protocol settings open the following URL:

http://<ip-address>/maintenance/cptz.html

© 2013 RadiumBoards
All Rights Reserved

Preset

Set a location for the preset, calls the preset points, PTZ automatically turns to the setting position.



Use these buttons to move the camera.

Use these buttons to change the zoom, focus and iris level and set the home position.

© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in PTZ preset page

Table 30 Fields in the Preset Page

Field Name	Description	Values
Preset	Specifies a pre-defined camera view that can be quickly and easily viewed in the Live View page, simply by selecting the preset's name from the drop-down list. You can set the different location for the preset position.	There are 255 different preset location .
ID	The ID is corresponding to the preset position you have selected.	Same as preset location
Name	You can specify the name corresponding to preset position.	
Go	Use this button to run the camera to the preset location	
Save	Use this button to save the preset location	
Delete	Use this button to delete the existing preset location	

© 2013 RadiumBoards
All Rights Reserved

Tour

Tour means that the selective channel is single window alternate patrol preview. The following table describes the various fields that appear in PTZ tour page

Table 31 Fields in the Tour Page

Field Name	Description	Values
Tour	Specifies the different tour that you can select, edit and configure the tour.	There are 8 different tour.
Name	Specifies the name correspond to the selected tour.	
Preset (1-5)	Specifies the 5 different preset positions for the single tour. you can set 5 different positions.	
Go	Use this button to run the tour	
Save	Use this button to save the tour	
Delete	Use this button to delete the existing tour	
Stop	Use this button to stop the running tour.	

© 2013 RadiumBoards
All Rights Reserved

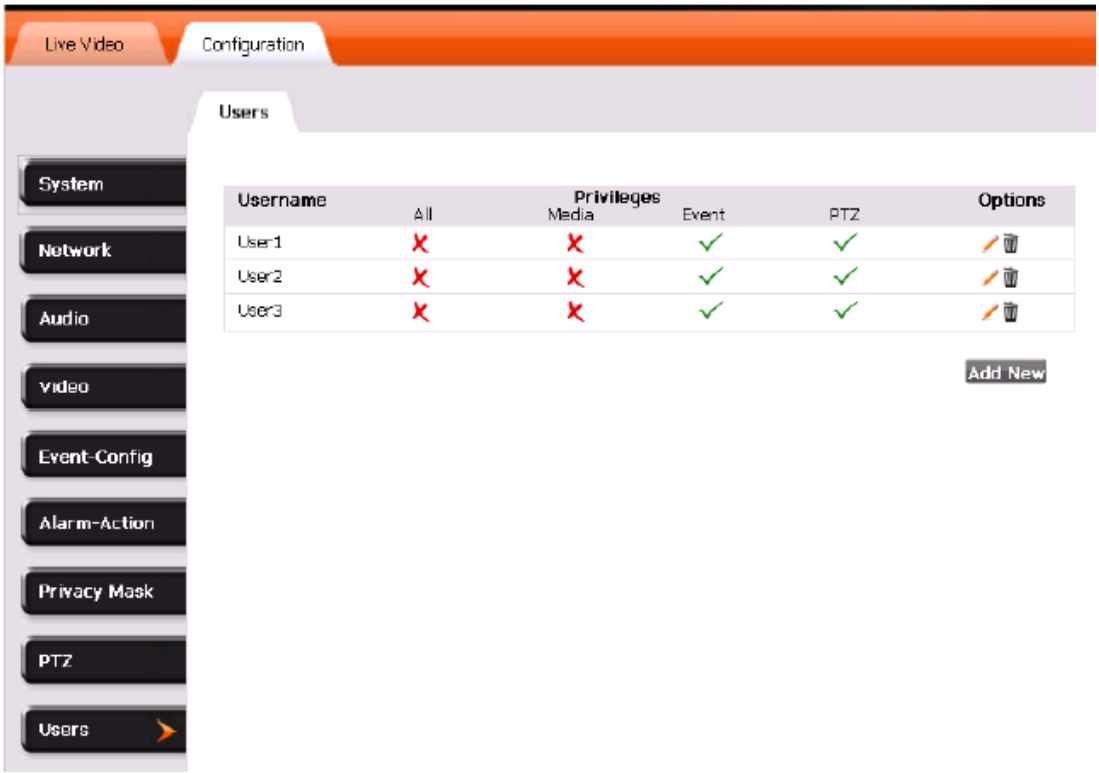
User

You can configure USER settings by performing the following steps:

- Log in to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on **User**.

The user account settings include configuring usernames/ passwords and adding/ deleting users.

There will be 10 user accounts by default, but only one user can access the camera at the initially that is admin, and then admin can change the settings related to the users.



- You may add nine different users by clicking on the Add New button shown in the above fig.
- You may set the privilege by check the box that you want to give access permission.
- If no check box selected, user will have only “Video view permission”.
- Once you added the user, if required to modify you have to delete it first and re-add the user.
- You may delete the user account by using the delete button shown in the above figure.

- Provide the desired values.
- Click **APPLY** to save all changes.

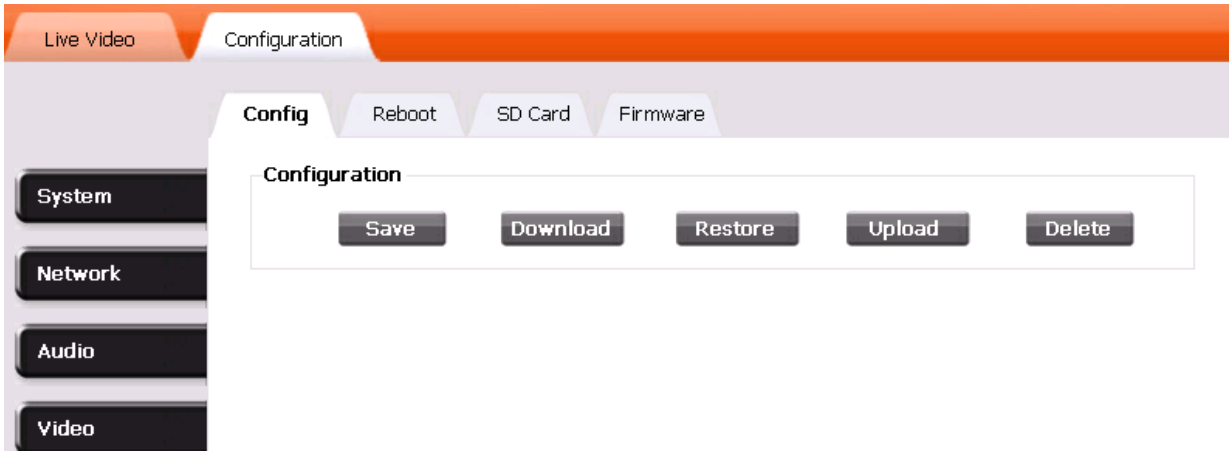
© 2013 RadiumBoards
All Rights Reserved

13. MAINTENANCE

You can configure maintenance settings by performing the following steps:

- Log on to the network camera to open its Live View page.
- Click the **Configuration** menu.
- In the left pane, click on **Maintenance**.

Config



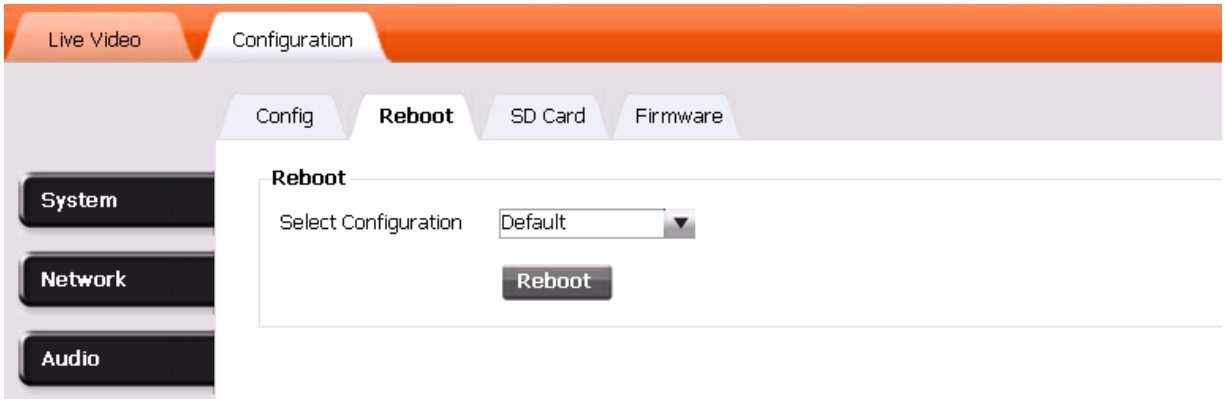
The following table describes the various fields that appear in config page

Table 32 Fields in the Config Page

Field Name	Description	Values
Save	Use this button to save the current configuration setting	
Download	Use this button to download the current configuration setting as .cfg format at default location.	
Restore	Use this button to restore all the settings to the factory default values, meaning that the unit must be reconfigured and any event types and PTZ presets must be recreated	
Upload	Use this button to upload any saved configuration by selecting from the desired location	
Delete	Use this button to delete the selected configuration setting	

© 2013 RadiumBoards
All Rights Reserved

Reboot

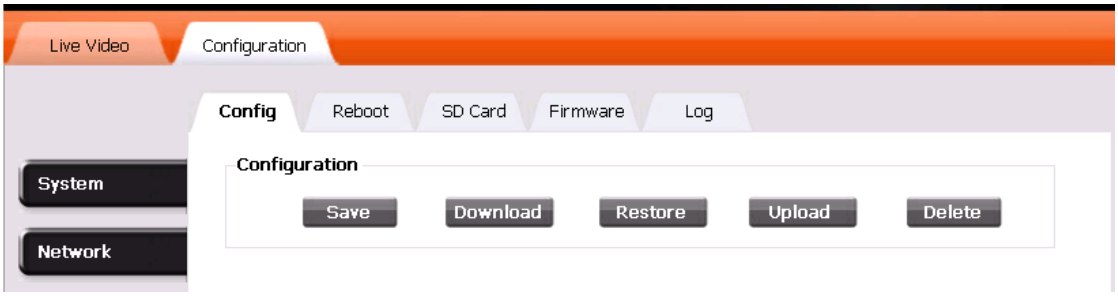


The following table describes the various fields that appear in reboot page

Table 33 Fields in the Reboot Page

Field Name	Description	Values
Select configuration	Specifies the configuration that you want to select and reboot with that configuration.	
Reboot	Use this button to perform a correct restart of the DVE with the selected configuration , if it is not behaving as expected	

SD Card



The following table describes the various fields that appear in SD card page.

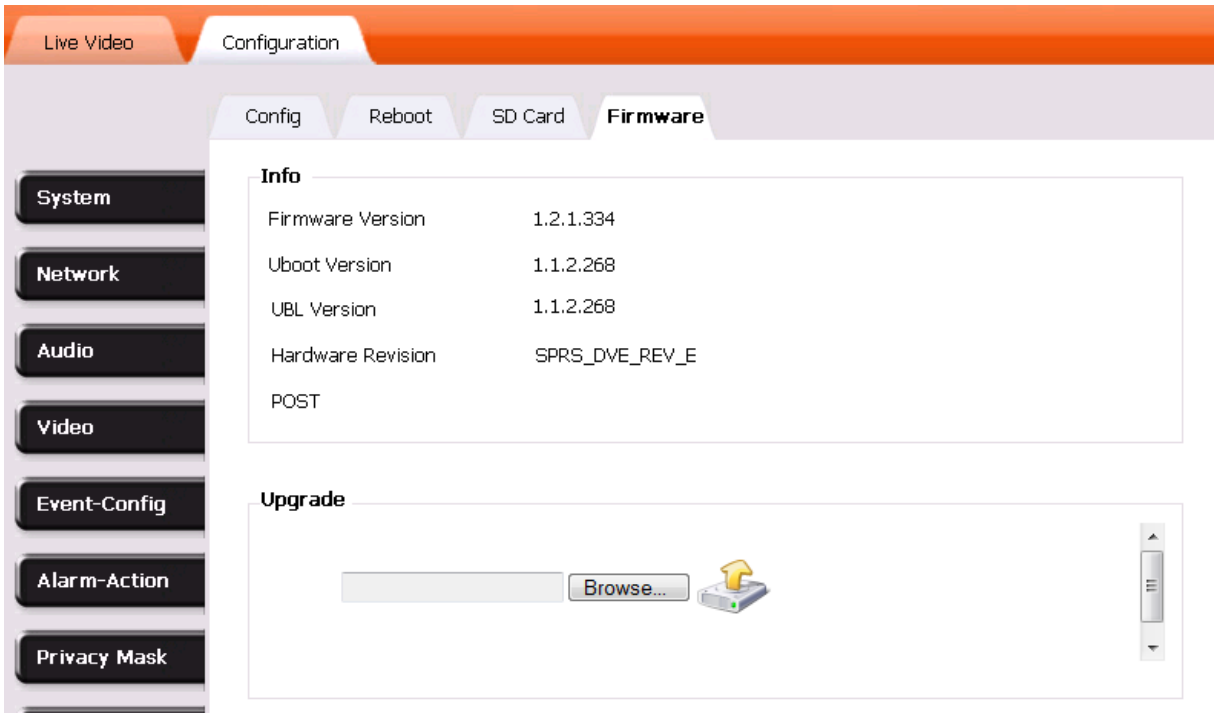
© 2013 RadiumBoards
All Rights Reserved

Table 34 Fields in the SD Card Page

Field Name	Description	Values
Remove	Use this button to remove/ unmount the SD card.	
Mount	Use this button to mount the SD card.	
Format	Use this button to format the SD card.	

Firmware

Firmware update refers to the replacement of a product with a newer version of the same product in order to keep the system updated. When upgrading the camera with the latest firmware, the camera receives the latest functionality.



© 2013 RadiumBoards
All Rights Reserved

The following table describes the various fields that appear in the Update Firmware page:

Table 35 Fields in the Firmware Page

Field Name		Description
Current firmware version	Kernel Version	Specifies the kernel version of the firmware.
	UBL version	Specifies the UBL version.
	U-Boot Version	Specifies the universal boot loader version which initializes the version of the firmware.
	Hardware revision	Specifies the hardware revision of the firmware.
Browse	Enables to navigate and select the firmware on your computer.	
Update	Upgrades the camera with the latest firmware.	

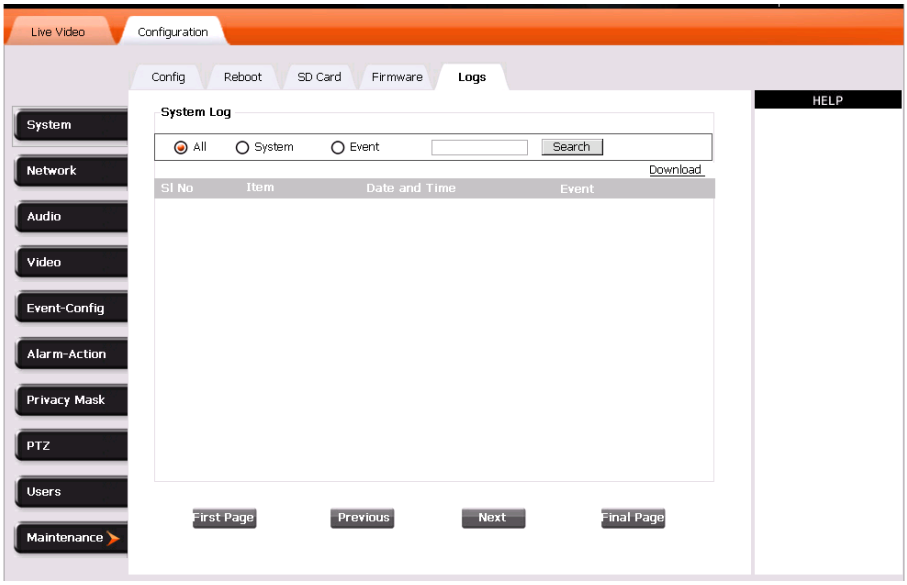
Note:

- Ensure you upload the correct firmware file because uploading the wrong model firmware may damage your device.

© 2013 RadiumBoards
All Rights Reserved

Logs

Logs provide information about system events.



The following table describes the various fields that appear in the Log page:

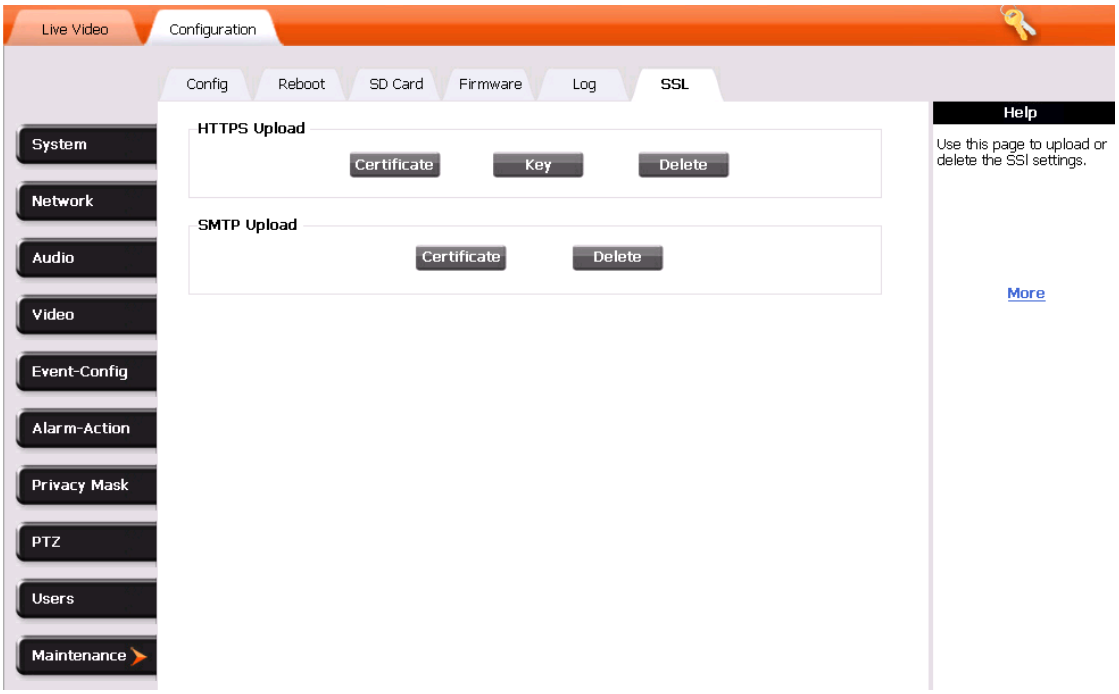
Table 36 Fields in the Log Page

Field Name	Description
All/System/Event	You can select the event type you want to see.
Search	You can search for any particular log corresponds to string entered.
Download	Use this button to download logs to the computer.
Item	Specifies the serial number of the events or all access to the camera.
Date and Time	Specifies the date and time of a specific event.
Events	Specifies a brief description of each event.
First Page	Specifies the first page with latest 20 events.
Previous	Specifies the previous 20 events to get to the previous page.
Next	Specifies the next 20 events to move to the next page.
Final page	Show the last page of the logs.

© 2013 RadiumBoards
All Rights Reserved

SSL

SSL is Secure Sockets Layer. It is a commonly used protocol for managing the security of a message transmission on the internet.
The user has to provide the Certificate and Key for the HTTPS Upload.
For SMTP Upload, only the Certificate is required.



© 2013 RadiumBoards
All Rights Reserved